Final

Remedial Investigation Report

Phase I & II

Medley Farm Site

Gaffney, South Carolina



February 1991

SIRRINE ENVIRONMENTAL CONSULTANTS



APPENDIX A

PROJECT OPERATIONS PLAN AND APPROVAL

EQUIPMENT DECONTAMINATION

5.1.7.2 <u>Decontamination of Drilling, Hydraulic Testing and Excavating</u> <u>Equipment</u>

Equipment used for test pit excavation, soil or rock drilling, monitoring well installation and development or hydraulic testing will be cleaned and handled in accordance with the following guidelines:

- 1. Backhoes, drill rigs and all support equipment shall be free from excess grease, oils, and caked-on soils from previous work prior to arrival at the site. Equipment which leaks fuel, coolant, and lubricants shall be removed from the site and repaired prior to use.
- 2. The work area of drill rigs and all downhole tools and equipment shall be cleaned with high pressure steam (water at 200 degrees F and 1500 psi) cleaning equipment using potable water from a treated municipal supply at the commencement and completion of the work and between boring or well locations. Backhoes used for test pit excavation shall be cleaned in the same manner. During initial drilling activities rinsate samples will be taken of downhole equipment to confirm the effectiveness of the cleaning procedures.
- 3. Equipment or materials not used immediately after decontamination will be placed on a plastic sheet, covered with plastic and secured to avoid potential contamination.
- 4. Equipment such as pumps, flow lines, etc. will be flushed thoroughly with potable water from a treated municipal supply prior to use.

5.1.7.3 <u>Decontamination of Well Casings, Screens and Centralizers</u>

All well casings and screens shall be transported to the site and stored at the site in their original factory plastic wrapping until needed for well construction. Well casings, wells screens and centralizers shall be cleaned

EQUIPMENT DECONTAMINATION

thoroughly immediately prior to well construction by washing inside and out with a solution of potable water from a treated municipal supply and a standard brand of phosphate-free laboratory detergent such as alquinox or Liquinox. This shall be followed by high pressure steam cleaning with equipment which will deliver water at a minimum temperature of 200 degrees F and pressure of 1500 psi.

5.1.7.4 <u>Sampling Equipment Decontamination</u>

Sampling equipment (split spoons, hand augers, trowels, mixing bowls, bailers, etc.) which will be used at multiple sampling locations will be cleaned in the field after each use, in accordance with the following cleaning procedures:

- 1. Clean with tap water and phosphate-free laboratory detergent, (Liquonox or equivalent) using a brush if necessary to remove particulate matter and surface films.
- 2. Rinse thoroughly with tap water.
- 3. Rinse thoroughly with deionized water.
- 4. Rinse two times with pesticide grade isopropanol solvent and allow to air dry for as long as possible.
- 5. Rinse thoroughly with deionized or organic-free water and allow to air dry for as long as possible.
- 6. Wrap equipment completely with aluminum foil or polyethylene bags, to prevent contamination if equipment is to be stored or transported.

All sampling equipment and instrumentation will be cleaned at the SEC laboratory according to the procedures described above prior to travel to the site except that hot water will be used during steps 1 and 2 and equipment will be allowed to air dry following the solvent rinse for a

EQUIPMENT DECONTAMINATION

minimum of 24 hours. Teflon bailers shall also be subjected to a rinse with a 10 percent nitric acid solution followed by an additional tap water rinse in the lab following step no. 2. Bailers will not be reused in the field.

Personnel involved in removing and preserving soil samples for chemical analysis will wear surgical inner gloves with nitrile outer gloves. Outer gloves will be washed with soapy water and rinsed with distilled or deionized water immediately prior to collecting each sample. Outer gloves may be removed and a new pair of inner gloves may be donned for performing delicate procedures such as capping voa vials.

Isopropanol used for decontamination will be collected and allowed to evaporate. Any residual isopropanol that remains unevaporated will be properly packaged and disposed of in accordance with applicable regulations. Spent decontamination solutions will not be allowed to flow offsite.

5.1.7.5 <u>Miscellaneous Equipment Cleaning Procedures</u>

Equipment such as well sounders and measuring tapes used for water level measurement or well construction, pH and specific conductivity meter probes, and submersible pumps used for well purging shall be cleaned using the following procedures:

- 1. Wash with laboratory detergent and tap water.
- 2. Rinse with tap water.
- 3. Rinse with deionized water.
- 4. Store equipment in a polyethylene bag or wrap with polyethylene film to prevent contamination during storage or from transit.

TEST PIT EXCAVATION AND SAMPLING

The test pits shall be excavated with a standard backhoe in accordance with Section 8.2 of "A Compendium of Superfund Field Operations Methods" (EPA/540/P-87/001). The final orientations and dimensions of test pits will be determined in the field based on observed conditions. Minimum test pit dimensions will be approximately 12 feet x 4 feet x 10 feet (1 x w x d). Test pits located at former lagoon sites will be excavated to the depths required to fully penetrate fill placed during the emergency response action so that the underlying soils can be observed and sampled.

Four (4) grab samples shall be collected from the natural soils (fill placed during the emergency response action will not be sampled) excavated from each test pit. The grab samples from each test pit will be combined in the field by mixing in a glass or stainless steel pan to form one composite sample from each test pit for analysis. The grab samples shall be combined by mixing with a stainless steel spoon as described in Section 4.6.3.3.4 of the USEPA Region IV SOPQAM (1986). The volatile organics sample will be collected from each test pit prior to the other samples to minimize volatilization of organics. All rocks, twigs or foreign debris will be removed from the sample prior to homogenizing.

All samples collected from the test pits shall be selected from the most heavily contaminated soils exposed in each test pit, based on the results of screening with an organic vapor analyzer (OVA, HNu, or TIP II) and visual assessment. The samples shall be carefully selected from the material removed by the backhoe to assure that material which has come into contact with the backhoe bucket is not included. In addition, soil selected for sampling shall be trimmed with a stainless steel or teflon scoop prior to final sample collection. A separate stainless steel scoop shall then be used to collect the sample.

Soil samples collected from the eight (8) test pits excavated during Phase IA will be subjected to TCL analyses. Soil samples collected from the seven (7) test pit excavated during Phase IB will be analyzed for the indicator parameters identified at the completion of Phase IA.

TEST PIT EXCAVATIN AND SAMPLING/MONITORING WELL INSTALLATION

Each test pit will be logged in the field book. Data recorded will include:

- o Name and location of job
- o Date of excavation
- o Approximate surface elevation
- o Total depth of excavation
- o Dimensions of pit
- o Method of sample acquisition
- o Type and size of samples
- o Soil and rock descriptions
- o Ground water occurrence
- o Organic vapor levels
- o Other pertinent information, such as waste material encountered

Final logs will be typed on the form included as Figure 5.4.

After logging, each test pit will be photographed and backfilled. The approximate location and orientation of each test pit will be plotted on the field plan and the location will be staked for future reference.

5.5.5 Equipment Decontamination

All equipment shall be decontaminated in accordance with the procedures described in Section 5.1.7.

5.6 MONITORING WELL INSTALLATION

5.6.1 Objectives and Schedule

Eight (8) ground water monitoring wells will be installed during the Phase IA field effort to characterize the hydrogeology at the site and to investigate the potential presence and nature of ground water contamination. Monitoring wells will generally be installed in pairs consisting of a water table well and a deeper bedrock well, to investigate the vertical extent of potential contamination. In a case where no appreciable water was encountered above bedrock, only one well will be installed at that location.

5.6.2 Monitoring Well Locations and Construction Details

The four (4) proposed well-pair locations are shown on Figure 5.5. The rationale for the selection of these locations is presented briefly below:

- o MW-1; this well pair is approximately 400 feet northwest of suspected disposal activities, in the presumed upgradient direction. The location of the upgradient well will be determined in part using the results of the soil gas survey. The well pair was placed between the site and Sprouse well to confirm that the private well contamination is not the result of site activities.
- o MW-2; this well pair is situated within the southeast boundary of the suspected disposal area. This location was selected to enable sampling of ground water immediately downgradient of former disposal and storage areas.
- o MW-3 and MW-4; these locations were selected to be downgradient from former site operations, along probable fracture traces which would constitute the most likely pathways for contaminant migration from the site.

These locations will be finalized after the soil gas survey data has been reviewed and the fracture trace analysis is completed using the 1 inch: 100 feet topographic site plan and aerial photographs.

A water table well and a deeper bedrock well will generally be installed at each location. The wells installed at each well pair location shall generally be spaced no greater than ten (10) feet apart. If ground water is not encountered in the saprolite at the proposed well pair locations, a single bedrock well will be completed to a depth of approximately 20 feet below the first occurrence of ground water at that location. The need for

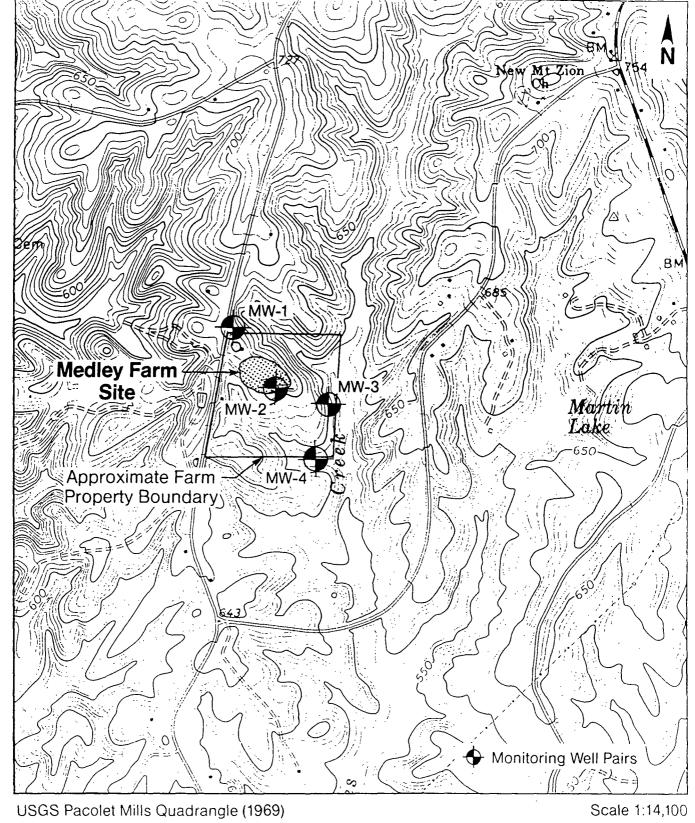


Figure 5.5

Proposed Locations of Groundwater Monitoring Well Pairs

Medley Farm Site Gaffney, South Carolina



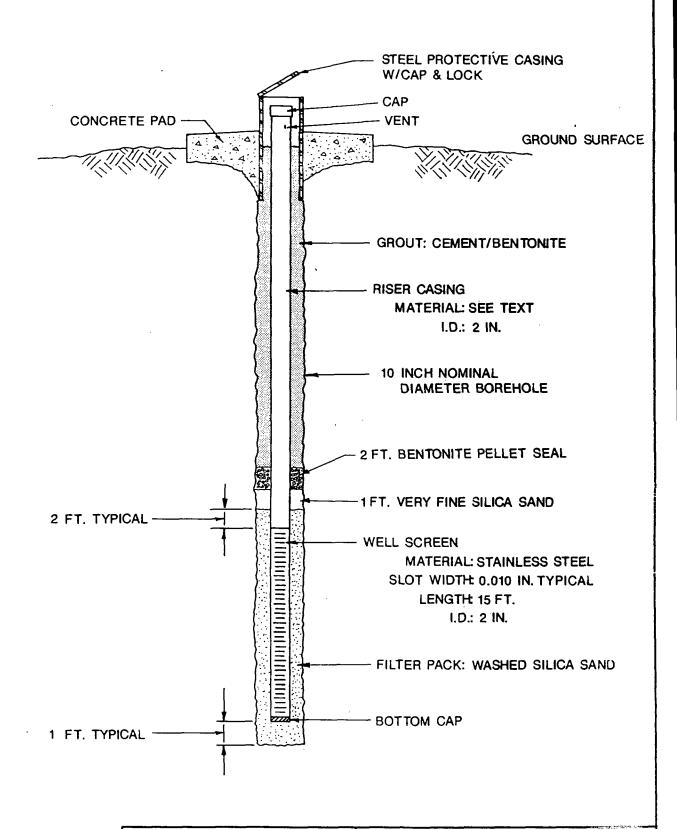
additional, deeper bedrock wells or alternate well locations will be assessed after completion of the Phase I RI field work. Where the water table occurs in the saprolite, the deeper well will be advanced to approxi- mately 25 feet below auger refusal into the upper portion of the bedrock at a location adjacent to the saprolite well. Drill cuttings and drill rates will be monitored to establish the true depth to bedrock.

The saprolite well at each location will be abbreviated as SW and the bedrock well as BW for identification. The number of the well pair location will be maintained with the individual wells. For example, the bedrock well at well pair MW-3 will be called BW3.

Water table wells constructed in saprolite will consist of 15-foot-long, 2-inch I.D., type 304 stainless steel well screens set from approximately five (5) feet above to ten (10) feet below the water table. Screen slot widths shall generally be 0.010 inch unless grain size analyses of soil samples obtained from the adjacent boring for the companion bedrock well indicate that an alternate size should be selected. Sand packs will be constructed of washed silica sand compatible with the screen slot size such as Ottawa sand (ASTM C190). Riser pipe will consist of National Sanitation Foundation Potable Water Grade, Schedule 40 PVC. All piping will be flush joint and threaded and there will be no use of glue.

Bedrock wells will consist of four (4) inch I.D., type 304 stainless steel casing installed from ten (10) feet above the static water level encountered at the time of drilling to approximately five (5) feet into the bedrock (below auger refusal). Additional casing sections above the water level will consist of Schedule 40 PVC. A four (4) inch nominal diameter corehole will be drilled to approximately 20 feet below the bottom of the stainless steel casing. The cored sections will be left uncased to provide access for packer testing and ground water sampling.

Monitoring well installation permits will be obtained from SCDHEC prior to mobilization for well installation. Typical monitoring well construction details are included as Figure 5.6 and 5.7.



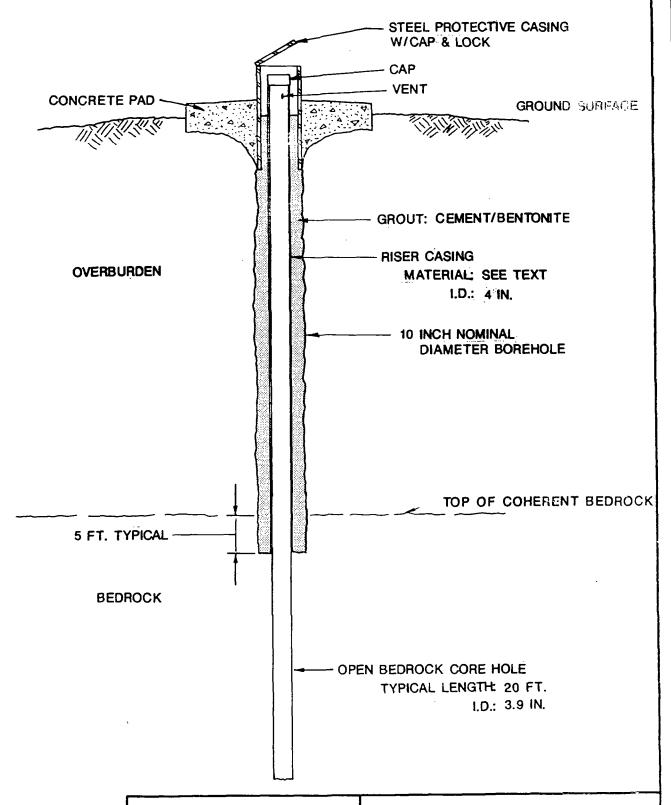


Greenville, South Carolina

MEDLEY FARM SITE RI/FS

TYPICAL MONITORING WELL DETAIL SAPROLITE WELL

FIGURE 5.6





Greenville, South Carolina

MEDLEY FARM SITE RI/FS

TYPICAL MONITORING WELL DETAIL BEDROCK WELL INSTALLATION

FIGURE 5.7

5.6.3 Task Team and Responsibilities

On-site Coordinator/Hydrogeologist - Field/office liaison

- Confirmation of well locations
- Log preparation
- Overall technical oversight
- Health and safety screening
- Subcontractor coordination

5.6.4 Equipment and Procedures

Equipment required for this task includes:

- o Drill rig and equipment
- o Decontamination equipment and supplies
- o Field logbook
- o OVA or HNu
- o Level C health and safety equipment

All drilling will be performed with conventional rotary drilling rigs fully equipped for dry auger and wet rotary drilling. An experienced geologist will continuously observe all drilling and well construction operations. All wells will be installed by a driller licensed in the State of South Carolina. No grease or oil shall be used on drill pipe joints, however teflon tape, vegetable oil or phosphate free laboratory detergent such as Liquinox may be used for lubrication.

Soil borings for monitoring well installation will be drilled using six-inch nominal I.D. (10 to 12-inch 0.D.) hollow stem augers to provide ample annular space for quality well construction. A tri-cone roller bit or approved plug shall be maintained at the bottom of the augers, as they are advanced, to prevent cuttings from entering.

Soil samples for general site characterization will be obtained from one boring at each well pair location at 5-foot intervals using a standard 2-foot split spoon sampler driven in accordance with ASTM D-1586-67. In this manner the entire overburden thickness penetrated at each location will be sampled at 5-foot intervals. All soil samples will be identified in the field by an SEC geologist using visual/manual techniques described in ASTM D-2487 and D-2488. The soils will be classified in accordance with the Unified Soils Classification System and a log of each boring will be produced. Physical soils analyses will be conducted on selected samples obtained from these locations. The type and approximate number of tests to be performed is as follows:

<u>Test</u>	ASTM <u>Method</u>	Estimated <u>Quantity</u>
Natural Moisture Content	D-2216	12
Sieve Analysis	D-422	8
Hydrometer Analysis	D-422	4
Atterberg Limits	D-4318	8

All well materials will be steam cleaned immediately prior to installation. Clean, new disposable rubber gloves will be worn when handling well screens or casings. All well casing and screens will be transported to, and stored at the site in plastic wrap. Personnel handling these items will not handle tools or drilling equipment while installing the well.

The saprolite and bedrock wells will be installed as described below. Bedrock wells will be installed first so that the screen slot width and filter pack requirements of adjacent saprolite wells may be evaluated based on soil samples obtained while drilling the boring for the bedrock well.

Bedrock Wells

 Advance the borehole with 6-inch I.D. hollow stem augers to auger refusal taking split spoon soil samples at five foot intervals. The moisture content of each soil sample will be visually assessed and noted on the log and frequent water level measurements will be taken

through the augers to approximate the static water level at the time of drilling.

- 2. Remove the augers from the borehole.
- 3. Advance the borehole to a minimum of five (5) feet below auger refusal using a 10 inch minimum diameter tri-cone roller bit. Potable water will be used as a drilling fluid, however sodium bentonite may be added to stabilize the borehole and remove drill cuttings if necessary. The actual depth to which this portion of the borehole will be advanced will be determined in the field based on drill advance to assure that competent bedrock is penetrated.
- 4. Measure all casing sections required and record all measurements in the field logbook.
- 5. Assemble the necessary sections of 4-inch casing and lower the casing to the bottom of the borehole. Centralizers will be attached at 30 foot intervals at this time.
- 6. Fill the annular space between the casing and the borehole walls with neat cement grout installed through a tremie pipe set at the bottom. Grout will consist of not more than seven (7) gallons of potable water per 94-pound bag of Portland Type I Cement (ASTM C150). Approximately 3% (by weight) bentonite powder will be added to improve flow and reduce shrinkage.
- 7. After the grout has been allowed to set for a minimum of 24 hours, the casing will be flushed out to the bottom with potable water using a 3-7/8 inch tri-cone roller bit.
- 8. The borehole will then be advanced into the bedrock by coring. The bedrock will be cored using an H-series double tube core barrel. The corehole produced with this barrel will be approximately 4 inches in diameter. A core barrel with a split inner barrel will be used to recovery and facilitate assessment of the bedrock structure. Core

runs will typically be five feet in length. Clear, potable water will be used as drilling fluid for coring. The volume of water pumped into the corehole while coring will be measured. Rock core recovered will be stored in 5-foot-long wooden core boxes until the project has been completed. The rock cores will be logged by a qualified SEC geologist. Logs will include detailed descriptions of bedrock lithology, grain size, texture, degree of weathering, hardness, color, and fracture characteristics. In addition, color photographs will be taken of the core.

The corehole shall be advanced approximately 20 feet below the bottom of the 4-inch stainless steel casing.

- 9. The corehole will be flushed thoroughly with potable water to removing any remaining cuttings at completion of the final core run.
- 10. The protective casing and concrete pad will be installed to complete the installation.

Saprolite Wells

- 1. Advance the borehole with 6-inch I.D. hollow stem augers to approximately 11 feet below the static water table.
- 2. The lengths of all screen and riser casing sections, bottom plugs, etc. will be measured and recorded.
- 3. The desired sections of 2-inch well screen and riser pipe will be assembled and lowered to the bottom of the borehole through the augers. Centralizers will be at the bottom of the well screen and at 30 foot intervals.
- 4. Washed silica filter sand will be poured via tremie pipe through the augers while the augers are pulled back incrementally to construct a continuous filter pack within the borehole annulus which will extend from approximately one (1) foot below the well screen to a minimum of

two (2) feet above the slotted section. The depth to the sand pack will be frequently measured through the augers using a properly decontaminated stainless steel weight attached to a fiberglass measuring tape to maintain the sand inside the augers as the filter pack is constructed.

- 5. A 2-foot-thick layer of very fine sand will be installed immediately above the filter pack of each well prior to installation of the bentonite seal. This very fine sand layer will consist of Foster-Dixiana BX-30 or equivalent. The low permeability of the fine sand will act as an additional safeguard to ensure that grout contamination of the filter pack adjacent to the well screen will not occur.
- 6. A 2-foot-thick bentonite seal will be constructed by pouring bentonite pellets through a tremie pipe into the annular space within the augers in the manner described above. Potable water will be added to the borehole at ten minute intervals to aid in the hydration of the bentonite seal. The bentonite seal will be allowed to hydrate for at least 30 minutes prior to placement of grout. Seal material will be placed in an above ground jar and hydrated to confirm the completeness of the hydration process before proceeding.
- 7. Tremie grout the remaining annular space from the bottom up with neat cement grout as described for bedrock well installation.
- 8. Remove the augers from the ground and top off the grout.
- 9. After allowing the grout to set approximately 16 hours, install the protective casing and concrete pad to complete the installation.

Final well construction details will be typed on the form included as Figure 5.8. Final bedrock core descriptions will be presented on the form included as Figure 5.9. Test boring logs used for final presentation of standard test boring data are described in Section 5.7.4.

5.6.5 Well Development

Well development will be conducted within two weeks after each well has been constructed, but no sooner than 48 hours after grouting is completed. Well development will be accomplished by a combination of methods which shall include manual pumping and surging with a PVC hand pump or pumping with a submersible PVC and stainless steel pump. As the wells are developed, ground water temperature, pH, and specific conductance will be monitored as indicator parameters. The turbidity of the developed water will be noted visually and recorded in the field log book. Well development will continue until indicator parameters are stable (< 10% change between four consecutive measurements) and the water is free of suspended sediments. At a minimum, a volume of water equal to that introduced during drilling will be removed from the well.

5.6.6 Equipment Decontamination

All equipment shall be decontaminated in accordance with procedures described in Section 5.1.7.

5.6.7 <u>Disposal of Excess Cuttings and Drilling Fluids</u>

Drill cuttings, fluids used in drilling, and water purged from wells during development and sampling shall be disposed of on-site. Cuttings from boreholes shall be spread on the ground in the immediate vicinity of the respective drilling sites. Drilling fluids and water purged from wells shall be allowed to percolate into the ground in shallow depressions or holes dug to prevent runoff in the immediate vicinity of each drilling site. These areas shall be filled with the soil removed to create the depression/hole after completion of drilling and sampling activities.

Ground water monitoring well pair MW-2 will be placed within the southeast boundary of the suspected disposal area. This section of the suspected disposal area is outside of former lagoons and drum storage areas. The NUS geophysical survey indicates that the location for MW-2 is not within an anomalous zone. Nonetheless, an OVA will be used to monitor cuttings from the drilling as part of site health and safety precautions. Cuttings that are significantly above background readings will be containerized with ultimate disposal dependent on results of the MW-2 analyses.

5.7 SOIL BORINGS

5.7.1 Objectives and Schedule

Approximately 12 soil borings will be drilled during Phase IB in suspected disposal and storage areas to further investigate the vertical and horizontal extent of contaminant sources. The soil borings will also supplement the hydrogeologic characterization of the site.

5.7.2 Sampling Locations and Frequency

The first boring will be drilled in an appropriate background location where samples will be collected for determining background levels of metals and pesticides. Six (6) borings will subsequently be drilled through suspected former lagoon areas. Five additional borings will be placed in the most apparently contaminated former drum storage areas as indicated by the soil gas survey conducted in Phase IA. All soil boring locations will be selected at the completion of Phase IA based on the results of the soil gas survey, analyses of soil samples collected from test pits and existing evidence of former lagoon and drum storage area locations.

Each boring will be advanced to a depth of 25 feet. Soil samples will be collected at five foot intervals from each boring as described in Section 5.6.4.

5.7.3 Task Team and Responsibilities

On-site Coordinator/Geologist - Field/office liaison

- Confirmation of boring locations
- Log preparation
- Overall technical oversight
- Subcontractor coordination

Technician

- Health and safety screening
- Sample packaging and shipment
- Assistance with record keeping

5.7.4 Equipment and Procedures

Equipment required for this task includes:

- o Drill rig and equipment
- o Stainless steel split spoon samplers
- o Decontamination equipment and supplies
- o Field logbook
- o OVA or HNu
- o Level C health and safety equipment
- o Sample containers
- o Stainless steel utensils
- o Engineers rule

The soil borings will be drilled with hollow stem augers. A tri-cone roller bit or approved plug shall be maintained at the bottom of the augers as they are advanced to prevent cuttings from entering. Split spoon soil samples will be collected at five foot intervals by driving a two-foot-long stainless steel split spoon assembly in accordance with ASTM D-1586-67.

Each split spoon sample collected for chemical analyses will be taken according to the following procedure:

1. Decontaminate sampler as specified in Section 5.1.7.

- 2. Drive sampler 24 inches with a 140-pound hammer falling 30 inches.
- 3. Sample aliquots for chemical analyses will be immediately removed from the split spoon sampler using a decontaminated stainless steel spatula, scoop or teaspoon and placed in the appropriate pre-labeled containers provided by the analytical laboratory. Aliquots for volatile organic analyses shall be collected first.
- 4. Store all sample aliquots for chemical analyses at 4°C.

A portion of each split spoon sample will also be collected for field screening with an organic vapor analyzer. The samples collected for organic vapor screening will be placed in 8 ounce jars so that approximately 2-1/2 inches of headspace remains. The top of the jar will be immediately covered with aluminum foil and the jar lid will be tightly closed to seal the jar. The jars will then be shaken thoroughly and stored in a location protected from direct sunlight or extremely high or low temperatures. The soil samples will be allowed to sit for at least one-half hour prior to headspace screening. Headspace screening will be performed by penetrating the aluminum foil jar cover with the sampling probe of the organic vapor analyzer to extract the gas for analysis. Clean soil sample jars (every tenth jar) will be sealed empty and screened to confirm jar cleanliness. Each jar will be labeled to identify the boring number, sample number, depth of sample and the time each sample was obtained. The results of organic vapor screening, including the ambient air temperature at the time screening was conducted, the time each sample was screened, and the background reading on the organic vapor analyzer immediately prior to screening, will be recorded on the log form shown in Figure 5.10.

Within the suspected lagoon areas, or other potential waste disposal areas, soil boring samples collected from depths of 10, 15 and 25 feet will be sent to the laboratory for analysis of indicator parameters. Samples from above 10 feet will not be analyzed from these borings which will be drilled in areas where samples obtained from test pits will provide near surface characterization. If laboratory analyses of samples obtained from 10 and 15

feet show no contamination, the sample at 25 feet will be discarded at the laboratory. Otherwise, all three samples will be subjected to individual laboratory analyses. All samples will also be subjected to field screening using an organic vapor analyzer as described previously. Results of the field screening will be recorded for correlation with laboratory analytical results.

Soil samples outside of waste disposal or lagoon sites will be collected at 5, 15, and 25 feet for the analysis of indicator parameters determined in Phase IA. If laboratory analyses of samples obtained from 5 and 15 feet show no contamination, the sample at 25 feet will be discarded at the laboratory. Otherwise, all three samples will be analyzed.

All soil samples will be identified in the field by a geologist using visual/manual techniques described in ASTM D-2487 and D-2488. The soils will be classified in accordance with the Unified Soils Classification System and final log of each boring will be typed on the SEC Test Boring Report included as Figure 5.11. The results of organic vapor screening will also be included on the test boring logs.

Physical soils analyses will be conducted on selected soil samples obtained from the test borings to confirm soil classifications made in the field and to provide data for the estimation of hydraulic conductivities. The type, procedures and an estimate of the number of tests which will be performed are summarized below:

<u>Test</u>	ASTM <u>Method</u>	Estimated Quantity
Natural Moisture Content	D-2216	24
Sieve Analysis	D-422	12
Atterberg Limits	D-4318	6

5.7.5 Equipment Decontamination

Equipment will be decontaminated in accordance with the procedures described in Section 5.1.7.

5.7.6 Borehole Abandonment and Disposal of Excess Cuttings

All boreholes will be abandoned by tremie grouting with cement/bentonite grout. Cuttings from boreholes shall be spread thinly over the ground surface in the immediate vicinity of the respective drilling sites.

5.8 GROUND WATER SAMPLING

5.8.1 Objectives and Schedule/Sampling Locations and Frequency

One set of ground water samples will be collected from surficial and bedrock monitoring wells at MW-2 and MW-4 during Phase IA. These four (4) sets of samples will be analyzed for the complete list of TCL and TAL parameters to assist in finalizing the site specific list of indicator parameters to be utilized in Phase IB sampling efforts. One set of samples will be collected from the wells installed at MW-1 and MW-3 along with the wells at MW-2 and MW-4 during Phase IB. The eight (8) sets of samples collected during Phase IB will be analyzed for the indicator parameter list. Ground water samples will be obtained in accordance with EPA Region IV protocols. The ground water analyses will be evaluated to assess potential impacts to ground water at the site.

5.8.2 Sampling Locations and Analytical Requirements

Monitoring well locations are shown on Figure 5.5 (section 5.6.2).

Analytical requirements are discussed above and in section 5.1.3.

5.8.3 <u>Task Team and Responsibilities</u>

On-site Coordinator/Sampling Specialist

- Field/office liaison

- Overall technical oversight

Technician

- Health and safety screening

- General support

5.8.4 Equipment and Procedures

Equipment required for this test includes:

- o Field logbook
- o ph meter/calibration standards
- o Thermometer
- o Conductivity meter
- o Water level indicator
- o Purge pump
- o Generator
- o Closed top bailers teflon
- o Polypropylene cord
- o Fiberglass measuring tape and stainless steel weight
- o Sample containers and labels
- o Sample packaging and shipping equipment
- o Sample document control and shipping forms
- o Decontamination solutions and equipment
- o Organic vapor analyzer
- o Level C health and safety equipment

The SEC Field Data Information Log (Figure 5.12) will be used to record all measurements made during well purging and sampling. This form was designed to be used as a checklist and as documentation for all ground water sampling activities for an individual well. Information to be recorded on this form will include:

0	data	0	field personnel
0	site/facility name	0	well identification
0	weather conditions	0	total well depth
0	ground water depth	0	well diameter
0	casing material	0	well volume calculation
0	evacuation method	0	well integrity
0	field pH	0	field specific conductance
0	field Eh	0	water temperature

Completed Field Data Information Logs will be included for each well in the RI Report for this investigation. Sampling activities will also be documented in the field logbook.

Prior to the initiating of any activities at each well site, all sampling personnel will don new, laboratory grade gloves. These gloves will be replaced as necessary during well evacuation and sampling, and always changed between wells.

When the well is opened for sampling, any odors detected will be noted and the presence of organic vapors will be screened using an organic vapor analyzer.

5.8.4.1 Well Evacuation

Each well will be purged prior to sample collection to remove any stagnant water from the well, thereby ensuring that the samples collected are representative of the water quality surrounding each well. Prior to well evacuation or sample collection, the ground water depth is determined using an electronic water level meter as described in Section 5.10. Following each use, the instrument is cleaned according to the field cleaning procedure described in Section 5.1.7.

For wells that recover quickly, three to five volumes of water are removed. Specific conductance, pH, and water temperature will be measured periodically during well evacuation. Wells that can be evacuated to dryness with less than five well volumes being removed will be sampled as soon as the well has recovered enough to yield sufficient volume for a sample.

Well purging will be accomplished using teflon bailers or submersible pumps. Purging techniques will be in accordance with procedures described in section 4.7.5.3 of the EPA Region IV SOPQAM (April, 1986). The volume of water to be evacuated is calculated using the following equation:

 $V = TTr^2h$

where:

TT = 3.14159

r = radius of well casing

h = height of water column in well (Total well depth - depth to ground water prior to purging.)

V = volume of water in well

Minimum Purge Volume = Vx5

5.8.4.2 <u>Sample Collection</u>

- 1. After the well has been purged, collect the sample within 3 hours with the bailer. The sample containers will be filled directly from the bailer. Volatile organic samples will be collected first.
- 2. Measure and record in log book the pH, temperature, and specific conductance of the sample. These measurements may be taken from a sample collected in an additional container. All instrument calibrations will also be recorded. Visual characteristics of the sample, including insoluble materials, will be recorded.
- 3. Add chemical preservatives to sample bottles, if applicable.
- 4. Secure caps on bottles with laboratory-supplied custody tape.
- 5. Place VOC samples in plastic bags and seal.
- 6. Complete documentation for all samples.
- 7. Pack samples in coolers with ice pack samples for shipment.
- 8. Complete appropriate sections of chain-of-custody. Place custody sent around cooler.
- 9. Ship samples to analytical laboratories within 24 hrs.

SURFACE WATER AND SEDIMENT SAMPLING

10. Advise subcontracted laboratory of sample shipment.

5.8.5 Equipment Decontamination

Equipment shall be decontaminated in accordance with procedures described in Section 5.1.7. Purge pump tubing which has been submerged during well evacuation and all bailer cord will be discarded between well locations.

5.8.6 Disposal of Water Purged From Wells

Water purged from monitoring wells prior to sampling shall be handled as described in Section 5.6.7.

5.9 SURFACE WATER AND SEDIMENT SAMPLING

5.9.1 Objectives and Schedule

Surface water and sediment samples will be collected to determine the presence or absence of contaminants in these media and to compare the quality of surface water and bottom sediments entering and leaving the site. All surface water and sediment sampling will be conducted during Phase IB of the RI.

5.9.2 Sampling Locations and Analytical Requirements

Surface water and sediment samples will be obtained from four (4) locations. Approximate sampling locations are shown on Figure 5.13. The rationale for the selection of these locations is presented briefly below:

o RW-1/SS-1; this location is upgradient from the site. These samples will define background surface water and stream sediment conditions in Jones Creek.

SURFACE WATER AND SEDIMENT SAMPLING

- o Thermometer
- o Conductivity meter
- o Engineers rule
- o Stainless steel spoons or spatulas
- o Hand auger with stainless steel bucket
- o Stainless steel trowel or scoop
- o Pyrex glass or stainless steel mixing bowls
- o Sample containers and labels
- o. Coolers with ice packs
- o Sample document control forms
- o Decontamination solutions and equipment
- o Level D health and safety equipment

All surface water samples will be collected prior to sediment samples to avoid the influx of sediment into the surface water samples.

5.9.4.1 Surface Water Sample Collection

The following procedures will be followed for collecting surface water samples:

- 1. Sketch sampling location in field logbook. Photograph location of sample collection.
- 2. Prepare sample bottles and labels and don uncontaminated gloves.
- 3. Collect water sample by lowering sample bottle(s) into water facing upstream allowing water to enter and fill container completely.
- 4. Add chemical preservatives, if applicable, and secure caps.

 Decontaminate sample bottle(s) and affix labels.
- 5. Place sample containers in coolers, packed with ice.
- Measure and record physical characteristics of the water body

SURFACE WATER AND SEDIMENT SAMPLING

including: depth of water at sampling location, odor, color, turbidity, water temperature, pH, specific conductance and vegetation.

7. Complete appropriate portions of chain of custody.

5.9.4.2 Sediment Sample Collection

The following procedures will be followed for collecting stream sediment samples:

- 1. Sketch sampling location in field logbook.
- Depending on the character and accessibility of the sediments, a stainless steel trowel or hand auger may be used to collect the samples.
- 3. If it is necessary to wade into the water, the team member collecting the sample will go downstream of the sample collection point to avoid disturbing sediments. Sampling will begin at the furthest downstream sampling point and proceed upstream to avoid disturbing bottom sediment at the sampling location.
- 4. Prepare sample containers and labels.
- 5. With a stainless steel or glass mixing bowl and sampling equipment ready, don uncontaminated gloves.
- 6. Collect sediment samples while facing upstream and deposit the sediments into the mixing bowl.
- 7. Homogenize the sample thoroughly but gently with a stainless steel spoon or spatula as described in Section 4.6.3.3.4 of the EPA Region IV SOPQAM (April 1986).
- 8. Transfer the sample aliquots to the appropriate pre-labeled sample containers and secure caps.

GROUND WATER LEVEL MEASUREMENT

- 9. Place sample containers in coolers packed with ice.
- 10. Measure and document in the field logbook physical characteristics of the sampling point including: depth of water at sampling point, soil description of sediment sampled, stream bed characteristics at sampling point, etc.
- 11. Complete appropriate portions of chain of custody.

Representative sampling points for surface water and sediment samples will be selected in accordance with the criteria described in Section 4.6.2.1 of the EPA Region IV SOPQAM (April 1986). Surface water sampling points where natural mixing occurs such as immediately below natural channel constrictions or riffles will be selected. Sediment samples will be collected from depositional areas such as inside river bends.

5.9.5 Equipment Decontamination

All sampling equipment will be decontaminated in accordance with the procedures described in Section 5.1.7.

5.10 GROUND WATER LEVEL MEASUREMENT

5.10.1 Objectives and Schedule

Water level measurements will be taken from all monitoring wells installed at the site during the Remedial Investigation and from the existing SCDHEC well (MDZA). Water level measurements will be made on a bi-monthly basis or more frequently during the RI to monitor water level fluctuations. Water level measurements will be taken from all monitoring wells at the site on the same day at least two times during the RI to provide two complete sets of comparable measurements. Surveyed elevations will be established at each well to determine water level elevations. These water level measurements will be used to calculate hydraulic gradients and determine directions of ground water flow at the site.

GROUND WATER LEVEL MEASUREMENT

5.10.2 Equipment and Procedures

All water level measurements will be made using an electronic water level meter. The water levels will be measured by slowly lowering the instrument probe into the well. When the probe reaches the water surface, the circuit is completed and a buzzer is activated. The distance from the top of the well casing to the water level is then measured and recorded. The water level indicator cable is calibrated in increments of 0.05 feet. Water levels will be estimated to nearest 0.01 feet.

All water level measurements will be recorded in the field logbook including: date and time of measurement, description of measuring point and the name of the individual making the measurement. When the well cap is removed, an organic vapor analyzer will be used to screen the air space immediately above the well casing. The level of vapors detected and any odors noted will also be recorded.

A history of all ground water level measurements taken during the RI will be maintained for each well on a Ground Water Level Monitoring Report (Figure 5.14). Complete sets of water level measurements taken on the same day will be recorded on the Water Level Summary Report (Figure 5.15).

5.10.3 Equipment Decontamination

All equipment will be decontaminated between wells in accordance with the procedures described in Section 5.1.7.

5.11 HYDRAULIC TESTING

5.11.1 Objectives and Schedule

In situ hydraulic testing will be used to evaluate the hydraulic characteristics of the saprolite and bedrock aquifers beneath the site.

SLUG TEST PROCEDURES

5.11.4 Equipment and Procedures

5.11.4.1 Slug Test Procedures

Equipment required for this task includes:

- o Field logbook
- o Data logger and water level transducers
- o Electronic water level tape
- o Displacement slug
- o Decontamination solution and equipment
- o Level D or C health and safety equipment (based on previous well site screening data)

Slug tests will be performed and evaluated in accordance with procedures described by Hvorslev (U.S. Army Bulletin #36). Rising head permeability tests rather than falling head tests will be performed in all saprolite/water table wells since an induced rise in water level would result in water running out into the unsaturated portion of the gravel pack resulting in inaccurate hydraulic conductivity estimates. A conservative range of permeability values can be obtained by subjecting each test to three methods of analysis. Methods described by Hvorslev (1951), Bower and Rice (1976) and Nguyen and Pinder (1984) will be used.

Procedures to be followed for performing slug tests outlined below:

- 1. Measure and record the depth to water with the electronic water level tape.
- 2. Install water level transducer in monitor well.
- Record static water level. Check that it agrees with initial measurement.
- 4. Introduce slug into well.
- 5. Allow water level to stabilize.

WATER PRESSURE TEST PROCEDURES

- 6. Activate data logger and instantaneously remove slug.
- 7. Allow water level to stabilize.
- 8. Record data.

5.11.4.2 Water Pressure Test Procedures

Equipment required for this task includes:

- o Field logbook
- o Water pump
- o Water meter (measures flow to 0.1 gallons; calibrated)
- o Water pressure gauges (PSI; calibrated)
- o Pneumatic packer system
- o Surge tank (optional, depending on pump type)
- o Drill rig
- o Miscellaneous pipe, fittings and valves
- o Nitrogen tank with pressure regulator and two gauges
- o Air hose (reinforced)
- o Time piece
- o Engineers rule

Water pressure tests will be conducted using both double and single pneumatic packers in accordance with the general procedures described in the U.S. Bureau of Reclamations <u>Ground Water Manual</u>, 1977. Test zones will be determined by examining the retrieved bedrock cores. Each test zone will typically be tested at three approximately equal pressure steps to provide data for assessing the hydraulics of flow in the bedrock fractures. Maximum test pressures will be based on the available hydraulic head as determined from water level measurements made in wells constructed at the site.

5.11.4.3 <u>Pump Tests</u>

Equipment required for this task includes:



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E. ATLANTA, GEORGIA 30365

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Mr. Les Oakes King & Spalding 2500 Trust Company Tower Atlanta, GA 30303

Re: Approval of the Analytical Parameters and Phase IB Sampling Locations for the Medley Farms Superfund Site

Dear Mr. Oakes:

The Agency received the document entitled "Proposed Analytical Parameters and Phase IB Sampling Locations", dated November 3, 1989, on November 7, 1989. Comments generated by the review of this document were sent to you in a correspondence dated November 30, 1989. In this correspondence the Agency highlighted several technical concerns and suggested the most expeditious means of resolving these concerns.

In response to the Agency's November 30, 1989 letter, Mr. James Chamness, who is with Sirrine Environmental Consultants (SEC), the potentially responsible parties' (PRPs') consultant, called me on December 5, 1989. Our discussion centered on these highlighted concerns. Enclosed is a "Communication Record" from Mr. Chamness that accurately reports our conversation. Based on the information provided by Mr. Chamness during this telephone conversation, I approved the identified analytical parameters and Phase IB sampling locations. SEC is to submit a revised Phase IB sampling and analytical plan to the Agency that reflects the changes required by the Agency's November 30, 1989 letter and my December 5, 1989 telephone conversation with Mr. Chamness. I anticipate receiving this revised plan in the near future.

In addition to confirming the approval of the analytical parameters and Phase IB sampling points, this correspondence will prevent any misunderstanding as to when the Agency approved Task 2.3 - EPA Approval of Indicator Parameters specified in Figure 6.1 of the Medley Farm Work Plan. The Agency's approval on Task 2.3 was provided to SEC on December 5, 1989 and therefore, that is the date Agency is using to estimate the submittal date for the draft Remedial Investigation (RI) report. According to the schedule in Figure 6.1 of the Medley Farm Work Plan, the draft RI report should be submitted to the Agency the week of February 19, 1990.

If you have any questions on the above, please call me at (404)347-7791. Sincerely yours,

Jon K. Bornholm

Remedial Project Manager

Enclosure

cc: Knoll Simmons, Versar Jim Chamness, SEC Wayne Lee, EPA/ORC Wes Caughman, SCDHEC



COMMUNICATION REPORT		
Person Contacted Jon Bornholm	Project No. <u>G-8026</u>	
CompanyEPA-Region IV	Date <u>12/5/89</u> Time <u>9:30am</u>	
Address Atlanta, Georgia	Client Medley Farm Site PRPs	
	Re Response to EPA comments	
	on Proposed Phase IB	
Telephone No(404) 347-7791	Telephone Conversation X	
Recorded By James S. Chamness	Office Conversation	
 In the comments from EPA dated 30 November, Bornholm (EPA Project Manager) indicated that a comments 4, 6 and 7 would be required prior to 	response by telephone to	

Response to EPA Comment No:

4. Semi-volatile organic compounds were not detected in any ground-water samples analyzed during Phase IA at levels above SQLs. Compounds detected below SQLs consisted primarily of common laboratory artifacts. Therefore, semi-volatile organic analyses will not be performed on ground-water samples collected during Phase IB.

proposed Phase IB sampling and analytical plan. Based on the responses

summarized below, Jon gave SEC approval to proceed:

The ground-water samples (2) collected from the background wells (SW-1 and BW-1) will be analyzed for TAL Metals in addition to TCL volatile organic compounds.

6. Soil samples will be collected for Dioxin analysis from soil borings drilled at the locations where test pits TP2 and TP4 were excavated. One sample will be collected for dioxin analysis of the natural soils immediately underlying the fill materials which may have been placed during the EPA emergency response action. Logs of test pits TP2 and TP4 will be used to determine appropriate sampling intervals. These two (2) soil samples will be composited and one (1) composite soil sample will be analyzed for dioxins by CLP Special Analytical Services.

- 7. TP2 and TP4 were selected over test pits TP3 and TP9 as sampling locations for the Dioxin analyses for the following reasons: 1) trace levels (below SQLS) of pentachlorophenol, a potential dioxin precursor compound, was detected in samples TP2-1 and TP9-1. Since Aroclor 1254, another potential dioxin precursor was also detected in TP2-1, TP2 was selected as one of the dioxin sampling locations. Several dioxin related semi-volatile organic compounds were detected at low levels in TP4-1, since only one (1) dioxin related compound was detected in TP3-1, TP4 was selected as the second dioxin sampling location.
- Split samples will be collected by the EPA oversight contractor (Versar) from BW-1 and BW-3 (ground water) and RW-3 (surface water). Split samples will also be collected from selected soil boring samples.
- SEC will prepare a written response to all EPA comments (dated on November 30) on the Phase IB sampling plan.
- SEC intends to conduct Phase IB test pit excavation December 13-20. Ground-water, surface water and stream sediment samples may also be collected before Christmas. Soil borings will probably not be performed before the first week in January. Sirrine will contact Jon Bornholm to confirm schedules for field activities.

SIRRINE ENVIRONMENTAL CONSULTANTS, INC.

James S. Chamness

cc: Mr. Jon Bornholm - EPA, Region IV, Atlanta

Ms. Mary Jane Norville - King & Spalding

Mr. Ted Volario - National Starch

Mr. Phil Connor - Ogletree, Deakins, Nash, Smoak and Stewart

Project File

/rmb

MAY 2 3 1989

4KD-SFB

Mr. Les Oakes King & Spalding 2500 Trust Company Tower Atlanta, GA 30303

STATE STATE AND A STATE OF A STAT

Re: Agency's Approval to Proceed with Monitor Well Installation at the Medley Farms Superfund Site

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Dear Mr. Oakes:

By means of this letter the Agency is directing the Potentially Responsible Parties (PRPs) to have their contractor, Sirvine Environmental Consultants, proceed with the installation of monitor wells at the above referenced Superfund site. It is the Agency's understanding that well permits are forthcoming from the State of South Carolina Department of Health and Environmental Control (SCHEC) depending on Sirvine's submission of a revised Project Operations Plan (POP) to SCHEC and EPA. Even if well permits were not forthcoming, Sirvine is still to proceed with the installation of these monitor wells as the remadial investigation field work has been delayed long enough over this issue.

It is the Agency's desire to have the PRPs proceed with the installation of the monitor wells with or without the State's well permits. This is feasible as Superfund is only required to meet the technical requirements of ARARS, which is the category that the State's well permitting process falls into. Sirrine has assured the Agency that the design and construction of the monitor wells at the Medley Farm site satisfies the State's technical requirements for issuing a well permit. This provision, however, only holds true for activities conducted on—site. Therefore, it will be necessary to obtain a permit for the bedrock monitor well to be installed at 15%—3 as this spot is located off—site. The time required to install the other wells should provide Sirrine sufficient time to attain a State permit for this bedrock well.

Both the Agency and Sirrine have been in contact with the State in attempts to rectify this situation. Last week, SCDHEC proposed the relocation of two (2) saprolite wells. The Agency concurs with the relocations, as proposed by SCDHEC. These saprolite sonitor wells were originally to be located at MM-3 and MM-4. The new well locations are one to the east of the paired wells at MM-2 and the other to the north of MM-2. Both of these new locations will be in close proximity to the boundary of the former disposal area. The location and rationals for relocating these 2 saprolite sonitor wells is the only change to be incorporated in the revised POP.

I have been in contact with Sirrine and have informed them of the issuance of this directive. The driller they have subcontracted is to mobilize and initiate drilling activities the week of May 22, 1989.

If you have any questions, please contact me at 347-7791. Sincerely yours,

Jon K. Bornholm Superfund Project Manager

CC: Wayne Lee, OPC
Lynn Hartin, SCOHEC
Gordon Peterson, Sirrine



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

MAY 1 6 1989 ATLANTA, GEORGIA 30363

4WD-SFB

Mr. Les Oakes King & Spalding 2500 Trust Company Tower Atlanta, GA 30303

Re: Approval of Medley Farms Project Operations Plan with Caveat on Cleaning Procedures for Drilling (Down-hole) Equipment

Dear Mr. Oakes:

I shared Sirrine's April 21, 1989 letter with Region IV
Environmental Services Division (ESD). ESD is in agreement with
the language in Sirrine's letter. The Medley Farm Work Plan dated
August 1988 and Project Operations Plan (POP) dated January 1989
are approved with the understanding that an alterate cleaning
procedure will be used to decon the drilling (down-hole)
equipment. It is also the Agency's understanding that additional
rinsate samples for quality control/quality assurance purposes will
be collected during the cleaning process for analysis. If this is
your understanding as well, no response is necessary from the
Potentially Responsible Parties.

Sincerely yours,

Jon K. Bornholm

Superfund Project Manager

CC: Ken Barry, Versar
Donald Hunter, ESD
Coleman Miles, Jr., SCDHEC
Gordon Peterson, Sirrine



Post Office Box 24000 Greenville, South Carolina 29616 (803) 234-3000

April 21, 1989

Mr. Jon Bornholm
USEPA - Region IV
Superfund Project Manager
345 Courtland Street
Atlanta, GA 30365

Re: Medley Farms Site POP - G8026

Dear Jon:

After discussing your letter of April 4, 1989 on the POP for the Medley Farms Site with the PRP's it was determined that further clarification was in order before proceeding with the field activities. Concerns were raised as to the interpretation that could be made of your response letter. Both Sirrine and the PRP's want to ensure that we are clearly understanding EPA's position on the field cleaning procedures. understanding that all elements of the Work Plan and POP have been approved with the exception of the field cleaning procedures for the "downhole" drilling equipment. As a point of clarification, the POP has been amended to utilize the ESD suggested cleaning protocols for all sampling equipment split spoons, hand augers, etc. A limited number of installations are being made at this site. In addition, the nature of the site is such that the staging of facilities for large equipment isopropanol rinses, storage of equipment, storage of chemicals and waste drums is difficult. No buildings or covered facilities are available. With this in mind, the costs of the additional rinsing for drilling equipment would become a significant portion of the overall costs. On numerous other sites under various regulatory programs, SEC has found careful steam cleaning as an acceptable method of preparing drilling equipment between installations. It is our understanding that the additional split samples will serve to substantiate the effectiveness of the cleaning efforts. Under these conditions, we would not anticipate the need to redo specific RI efforts unless the PRP's wished further confirmation of a result detected in the environmental samples. We would like to request that if this is your understanding of the situation, that the POP be signed with a footnote delineating the exception taken on the cleaning of the drilling equipment.

Mr. Jon Bornholm April 21, 1989 Page 2

If there are any problems, please contact myself or the PRP's.

Sincerely,

Gordon A. Peterson Project Manager

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET ATLANTA, GEORGIA 30365

APR 1 3 1263

4WD-SFB

Mr. W. Coleman Miles, Jr. SCDHEC 2600 Bull Street Columbia, SC 29201

Re: Response to Your November 1, 1988 Letter that Incorporates Comments from Michael Muthig on the Medley Farm Superfund Site

Dear Mr. Miles:

The following are the Agency's responses to Mr. Muthig's comments in his October 25, 1988 memo addressed to you.

- 1. The addition of the two objectives have been made to the Project Operations Plan (POP).
- 2. The location and number of monitoring wells proposed in the work plan and POP are deemed adequate to provide sufficient information for the initial evaluation of the hydrology under the site. The work plan as been structured so that if additional wells are considered necessary, they will be installed in Phase II. The number, depths and locations of these additional wells will be based on the information provided by the wells installed in Phase I. The State will have an opportunity to review the data from Phase I.
- 3. During periods of field work, when the contractor has personnel at the site, short-term water level measurements will be made.
- 4. A full round of sampling will be conducted in Phase IB. The initial sampling is only for waste characterization and to identify the site specific parameters to be used in subsequent sampling efforts.
- 5. Slug testing will be conducted as specified in Section 3.6.8 of the August 1988 Work Plan. The need for pump test data will be determined prior to initiating any remedial design.
- 6. The need for additional samples will be determined after the State and EPA reviews the analytical data generated as part of Phase I work.

 Table 5.1 reflects a listing of installations not sampling. I believe Table 5.2 lists the sampling activities.
- 7. As with previous comments, the PRP's consultant has proposed the work in stages. This was done primarily because there is insufficient data to support decisions, one way or another. Following a review of the Phase I data these decisions will be made. One decision that needs to be made at a later date is the necessity for paired bedrock wells.

- 8. The proposed well clusters in the work plan and POP represent an adequate initial effort to determine the hydraulic conditions at the site. If additional data is necessary to characterize the extent of groundwater contamination, it well be performed in Phase II.
- 9. Drill cuttings and drill rates will also be examined to help evaluate : the true top of bedrock.
- 10. The PRPs' consultant anticipates that the standard monitor well installation procedure as described in the work plan and POP will suffice. If conditions vary, a gravel pack analysis will be conducted using grain size information as you suggested.

I trust the above responses adequately address any concern SCDHEC may have with regards to the Medley Farm work plan and POP. If you have any questions, please call me at (404) 347-7791.

Sincerely yours,

Jon K Bornholm

Superiund Project Manager

cc: Michael Muthig, SCDHEC
Gordon Peterson, Sirrine
Les Oakes, King & Spalding

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Person Contacted John Bornholm Company EPA - RPM Address REGION IV Atlanta, GA	Project No. 6 8026 Date 2-10-1989 Time 14:40 hrs Client Medley Farm PRPs Re Medley Farm Site - RI
Telephone (404) 347 -7791 Recorded By Jim Chamness	Telephone Conversation Office Conversation
Called to check on sto review/approval of Phase IA TEST PIT	P.O.P. and to discuss
he indicated that s with the Phase IA	on the P.O.P however SEC should proceed test pit excavotion -1989 following in the P.O.P. as
· John indicated that Versar (the EPA ove probably be on si to monitor field activit	te 2-15-1989 a.m.

Distribution: Gordon Peterson Project File.



COMMUNICATI	ON REPORT
Name <u>John Bornholm</u>	Project No. <u>G-8026</u>
Company <u>U.S. EPA - Region IV</u>	Date <u>6-14-88</u> Time <u>9:50 a.m.</u>
Address 345 Courtland Street	[X] Telephone Conversation
Atlanta, Georgia	[] Office Conversation
Telephone No. <u>(404) 347-7791</u>	Re: Medley Farm Site RI/FS
Recorded By <u>Jim Chamness</u>	Soil Gas Survey

Mr. Bornholm, the EPA Project Manager for this site, gave SEC his approval to proceed with the soil gas survey described in the Project Operations Plant submitted 10 October, 1988, for this project. The soil gas samplers will be installed at the site during the period of 17 through 20 October by a representative of PETREX with guidance by SEC. The collectors will be left in the ground for a period of approximately four (4) weeks after which they will be retrieved and analyzed. Approximately three (3) weeks will then be required for analysis and data reporting.

SIRRINE ENVIRONMENTAL CONSULTANTS

Jim Chamness

cc: Mr. John K. Bornholm - EPA

Mr. Les Oakes

Mr. Roger Florio -Mr. Hank Graulich

Mr. Gordon Peterson - SEC

Mr. Jim Cloonan - SEC

Project File



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E. ATLANTA, GEORGIA 30365

JAN 0 4 1990

4WD-SFB

Mr. Les Oakes King & Spalding 2500 Trust Company Tower Atlanta, GA 30303

Re: Approval of the Analytical Parameters and Phase IB Sampling Locations for the Medley Farms Superfund Site

Dear Mr. Oakes:

The Agency received the document entitled "Proposed Analytical Parameters and Phase IB Sampling Locations", dated November 3, 1989, on November 7, 1989. Comments generated by the review of this document were sent to you in a correspondence dated November 30, 1989. In this correspondence the Agency highlighted several technical concerns and suggested the most expeditious means of resolving these concerns.

In response to the Agency's November 30, 1989 letter, Mr. James Chamness, who is with Sirrine Environmental Consultants (SEC), the potentially responsible parties' (PRPs') consultant, called me on December 5, 1989. Our discussion centered on these highlighted concerns. Enclosed is a "Communication Record" from Mr. Chamness that accurately reports our conversation. Based on the information provided by Mr. Chamness during this telephone conversation, I approved the identified analytical parameters and Phase IB sampling locations. SEC is to submit a revised Phase IB sampling and analytical plan to the Agency that reflects the changes required by the Agency's November 30, 1989 letter and my December 5, 1989 telephone conversation with Mr. Chamness. I anticipate receiving this revised plan in the near future.

In addition to confirming the approval of the analytical parameters and Phase IB sampling points, this correspondence will prevent any misunderstanding as to when the Agency approved Task 2.3 - EPA Approval of Indicator Parameters specified in Figure 6.1 of the Medley Farm Work Plan. The Agency's approval on Task 2.3 was provided to SEC on December 5, 1989 and therefore, that is the date Agency is using to estimate the submittal date for the draft Remedial Investigation (RI) report. According to the schedule in Figure 6.1 of the Medley Farm Work Plan, the draft RI report should be submitted to the Agency the week of February 19, 1990.

If you have any questions on the above, please call me at (404)347-7791. Sincerely yours,

Jon K. Bornholm

Remedial Project Manager

Enclosure

cc: Knoll Simmons, Versar Jim Chamness, SEC Wayne Lee, EFA/ORC Wes Caughman, SCDHEC



COMMUNICATION REPORT		
Person Contacted	Project No. <u>G-8026</u>	
CompanyEPA-Region IV	Date <u>12/5/89</u> Time <u>9:30am</u>	
Address Atlanta, Georgia	Client Medley Farm Site PRPs	
	Re Response to EPA comments	
	on Proposed Phase IB	
Telephone No(404) 347-7791	Telephone Conversation X	
Recorded By	Office Conversation	
In the comments from EDA dated 20 November 1		

In the comments from EPA dated 30 November, 1989, Mr.
Bornholm (EPA Project Manager) indicated that a response by telephone to comments 4, 6 and 7 would be required prior to approval to proceed with the proposed Phase IB sampling and analytical plan. Based on the responses summarized below, Jon gave SEC approval to proceed:

Response to EPA Comment No:

4. Semi-volatile organic compounds were not detected in any ground-water samples analyzed during Phase IA at levels above SQLs. Compounds detected below SQLs consisted primarily of common laboratory artifacts. Therefore, semi-volatile organic analyses will not be performed on ground-water samples collected during Phase IB.

The ground-water samples (2) collected from the background wells (SW-1 and BW-1) will be analyzed for TAL Metals in addition to TCL volatile organic compounds.

6. Soil samples will be collected for Dioxin analysis from soil borings drilled at the locations where test pits TP2 and TP4 were excavated. One sample will be collected for dioxin analysis of the natural soils immediately underlying the fill materials which may have been placed during the EPA emergency response action. Logs of test pits TP2 and TP4 will be used to determine appropriate sampling intervals. These two (2) soil samples will be composited and one (1) composite soil sample will be analyzed for dioxins by CLP Special Analytical Services.

- 7. TP2 and TP4 were selected over test pits TP3 and TP9 as sampling locations for the Dioxin analyses for the following reasons: 1) trace levels (below SQLS) of pentachlorophenol, a potential dioxin precursor compound, was detected in samples TP2-1 and TP9-1. Since Aroclor 1254, another potential dioxin precursor was also detected in TP2-1, TP2 was selected as one of the dioxin sampling locations. Several dioxin related semi-volatile organic compounds were detected at low levels in TP4-1, since only one (1) dioxin related compound was detected in TP3-1, TP4 was selected as the second dioxin sampling location.
- Split samples will be collected by the EPA oversight contractor (Versar) from BW-1 and BW-3 (ground water) and RW-3 (surface water). Split samples will also be collected from selected soil boring samples.
- SEC will prepare a written response to all EPA comments (dated on November 30) on the Phase IB sampling plan.
- SEC intends to conduct Phase IB test pit excavation December 13-20. Ground-water, surface water and stream sediment samples may also be collected before Christmas. Soil borings will probably not be performed before the first week in January. Sirrine will contact Jon Bornholm to confirm schedules for field activities.

SIRRINE ENVIRONMENTAL CONSULTANTS, INC.

James S. Chamness

cc: Mr. Jon Bornholm - EPA, Region IV, Atlanta

Ms. Mary Jane Norville - King & Spalding

Mr. Ted Volario - National Starch

Mr. Phil Connor - Ogletree, Deakins, Nash, Smoak and Stewart

Project File

/rmb

MAY 2 3 1989

4MD-SFB

Mr. Les Oakes King & Spalding 2500 Trust Company Tower Atlanta, GA 30303

CONTRACTOR AND COMMENT OF THE CONTRACTOR

Re: Agency's Approval to Proceed with Monitor Well Installation at the Medley Farms Superfund Site

Dear Mr. Oakes:

By means of this letter the Agency is directing the Potentially Responsible Parties (PRPs) to have their contractor, Sirrine Environmental Consultants, proceed with the installation of monitor wells at the above referenced Superfund site. It is the Agency's understanding that well permits are forthcoming from the State of South Carolina Department of Health and Environmental Control (SCHEC) depending on Sirrine's submission of a revised Project Operations Plan (POP) to SCHEC and EPA. Even if well permits were not forthcoming, Sirrine is still to proceed with the installation of these monitor wells as the remadial investigation field work has been delayed long enough over this issue.

It is the Agency's desire to have the PRPs proceed with the installation of the monitor wells with or without the State's well permits. This is feasible as Superfund is only required to meet the technical requirements of ARARS, which is the category that the State's well permitting process falls into. Sirrine has assured the Agency that the design and construction of the monitor wells at the Medley Farm site satisfies the State's technical requirements for issuing a well permit. This provision, however, only holds true for activities conducted on-site. Therefore, it will be necessary to obtain a permit for the bedrock monitor well to be installed at 15%-3 as this spot is located off-site. The time required to install the other wells should provide Sirrine sufficient time to attain a State permit for this bedrock well.

Both the Agency and Sirrine have been in contact with the State in attempts to rectify this situation. Last week, SCDHEC proposed the relocation of two (2) saprolite wells. The Agency concurs with the relocations, as proposed by SCDHEC. These saprolite monitor wells were originally to be located at MW-3 and MW-4. The new well locations are one to the east of the paired wells at MW-2 and the other to the north of MW-2. Both of these new locations will be in close proximity to the boundary of the former disposal area. The location and rationale for relocating these 2 saprolite monitor wells is the only change to be incorporated in the revised POP.

I have been in contact with Sirrine and have informed them of the issuance of this directive. The driller they have subcontracted is to mobilize and initiate drilling activities the week of May 22, 1989.

If you have any questions, please contact me at 347-7791. Sincerely yours,

Jon K. Bornholm Superfund Project Manager

C: Wayne Lee, ORC

Lynn Martin, SCOMEC

Gordon Peterson, Sirrine





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

MAY 1 6 1989

346 COURTLAND STREET ATLANTA, GEORGIA 30363

4WD-SFB

Mr. Les Oakes King & Spalding 2500 Trust Company Tower Atlanta, GA 30303

Re: Approval of Medley Farms Project Operations Plan with Caveat on Cleaning Procedures for Drilling (Down-hole) Equipment

Dear Mr. Oakes:

I shared Sirrine's April 21, 1989 letter with Region IV
Environmental Services Division (ESD). ESD is in agreement with
the language in Sirrine's letter. The Medley Farm Work Plan dated
August 1988 and Project Operations Plan (POP) dated January 1989
are approved with the understanding that an alterate cleaning
procedure will be used to decon the drilling (down-hole)
equipment. It is also the Agency's understanding that additional
rinsate samples for quality control/quality assurance purposes will
be collected during the cleaning process for analysis. If this is
your understanding as well, no response is necessary from the
Potentially Responsible Parties.

Sincerely yours,

Jon K. Bornholm

Superfund Project Manager

CC: Ken Barry, Versar
Donald Hunter, ESD
Coleman Miles, Jr., SCDHEC
Gordon Peterson, Sirrine



Post Office Box 24000 Greenville, South Carolina 29616 (803) 234-3000

April 21, 1989

Mr. Jon Bornholm USEPA - Region IV Superfund Project Manager 345 Courtland Street Atlanta, GA 30365

Re: Medley Farms Site POP - G8026

Dear Jon:

After discussing your letter of April 4, 1989 on the POP for the Medley Farms Site with the PRP's it was determined that further clarification was in order before proceeding with the field activities. Concerns were raised as to the interpretation that could be made of your response letter. Both Sirrine and the PRP's want to ensure that we are clearly understanding EPA's position on the field cleaning procedures. understanding that all elements of the Work Plan and POP have been approved with the exception of the field cleaning procedures for the "downhole" drilling equipment. As a point of clarification, the POP has been amended to utilize the ESD suggested cleaning protocols for all sampling equipment split spoons, hand augers, etc. A limited number of installations are being made at this site. In addition, the nature of the site is such that the staging of facilities for large equipment isopropanol rinses, storage of equipment, storage of chemicals and waste drums is difficult. No buildings or covered facilities are available. With this in mind, the costs of the additional rinsing for drilling equipment would become a significant portion of the overall costs. On numerous other sites under various regulatory programs. SEC has found careful steam cleaning as an acceptable method of preparing drilling equipment between installations. It is our understanding that the additional split samples will serve to substantiate the effectiveness of the cleaning efforts. Under these conditions, we would not anticipate the need to redo specific RI efforts unless the PRP's wished further confirmation of a result detected in the environmental samples. We would like to request that if this is your understanding of the situation, that the POP be signed with a footnote delineating the exception taken on the cleaning of the drilling equipment.

Mr. Jon Bornholm April 21, 1989 Page 2

If there are any problems, please contact myself or the PRP's.

Sincerely.

Gordon A. Peterson Project Manager

dew/L8026JB.GAP



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET ATLANTA, GEORGIA 30365

APR 1 3 1289

4WD-SFB

Mr. W. Coleman Miles, Jr. SCDHEC 2600 Bull Street Columbia, SC 29201

Re: Response to Your November 1, 1988 Letter that Incorporates Comments from Michael Muthig on the Medley Farm Superfund Site

Dear Mr. Miles:

The following are the Agency's responses to Mr. Muthig's comments in his October 25, 1988 memo addressed to you.

- 1. The addition of the two objectives have been made to the Project Operations Plan (POP).
- 2. The location and number of monitoring wells proposed in the work plan and POP are deemed adequate to provide sufficient information for the initial evaluation of the hydrology under the site. The work plan as been structured so that if additional wells are considered necessary, they will be installed in Phase II. The number, depths and locations of these additional wells will be based on the information provided by the wells installed in Phase I. The State will have an opportunity to review the data from Phase I.
- 3. During periods of field work, when the contractor has personnel at the site, short-term water level measurements will be made.
- 4. A full round of sampling will be conducted in Phase IB. The initial sampling is only for waste characterization and to identify the site specific parameters to be used in subsequent sampling efforts.
- 5. Slug testing will be conducted as specified in Section 3.6.8 of the August 1988 Work Plan. The need for pump test data will be determined prior to initiating any remedial design.
- 6. The need for additional samples will be determined after the State and EPA reviews the analytical data generated as part of Phase I work.

 Table 5.1 reflects a listing of installations not sampling. I believe Table 5.2 lists the sampling activities.
- 7. As with previous comments, the PRP's consultant has proposed the work in stages. This was done primarily because there is insufficient data to support decisions, one way or another. Following a review of the Phase I data these decisions will be made. One decision that needs to be made at a later date is the necessity for paired bedrock wells.

- 8. The proposed well clusters in the work plan and POP represent an adequate initial effort to determine the hydraulic conditions at the site. If additional data is necessary to characterize the extent of groundwater contamination, it well be performed in Phase II.
- 9. Drill cuttings and drill rates will also be examined to help evaluate the true top of bedrock.
- 10. The PRPs' consultant anticipates that the standard monitor well installation procedure as described in the work plan and POP will suffice. If conditions vary, a gravel pack analysis will be conducted using grain size information as you suggested.

I trust the above responses adequately address any concern SCDHEC may have with regalds to the Medley Farm work plan and POP. If you have any questions, please call me at (404) 347-7791.

Sincerely yours,

for & Bowl -

Superfund Project Manager

cc: Michael Muthig, SCDHEC
 Gordon Peterson, Sirrine
 Les Oakes, King & Spalding

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Person Contacted John Bornholm Company EPA - RPM Address REGION IV Atlanta, GA	Project No. 6 8026 Date 2-10-1989 Time 14:40 hr> Client Medley Farm PRPs Re Medley Farm Site - RI
Telephone (A0A) 347 -7791 Recorded By Jim Chamness	Telephone Conversation
Called to check on ste review/approval of Phase IA TEST PIT	P.O.P. and to discuss
he indicated that = with the Phase IA scheduled for 2-15 procedures outlined submitted on 25 John indicated that Versar (the EPA ove	on the P.O.P however SEC should proceed test pit excavation -1989 following in the P.O.P. as Jomuary 1989. a representative of rsight contractor) would
probably be on si to monitor field activit	te 2-15-1989 a.m.

Distribution: Gordon Peterson Project File.



COMMUNICATI	ON REPORT
Name <u>John Bornholm</u>	Project No. <u>G-8026</u>
Company <u>U.S. EPA - Region IV</u>	Date <u>6-14-88</u> Time <u>9:50 a.m.</u>
Address <u>345 Courtland Street</u>	[X] Telephone Conversation
Atlanta, Georgia	[] Office Conversation
Telephone No. <u>(404)</u> 347-7791	Re: Medley Farm Site RI/FS
Recorded By <u>Jim Chamness</u>	Soil Gas Survey

Mr. Bornholm, the EPA Project Manager for this site, gave SEC his approval to proceed with the soil gas survey described in the Project Operations Plant submitted 10 October, 1988, for this project. The soil gas samplers will be installed at the site during the period of 17 through 20 October by a representative of PETREX with guidance by SEC. The collectors will be left in the ground for a period of approximately four (4) weeks after which they will be retrieved and analyzed. Approximately three (3) weeks will then be required for analysis and data reporting.

SIRRINE ENVIRONMENTAL CONSULTANTS

Jim Chamness

cc: Mr. John K. Bornholm - EPA

Mr. Les Oakes

Mr. Roger Florio -

Mr. Hank Graulich Mr. Gordon Peterson - SEC

Mr. Jim Cloonan - SEC

Project File

APPENDIX B

PETREX® SOIL GAS SURVEY FINAL REPORT

FINAL REPORT ON THE FINDINGS OF THE PETREX SOIL GAS SURVEY CONDUCTED FOR SIRRINE ENVIRONMENTAL CONSULTANTS AT THE MEDLEY FARM SITE LOCATED IN GAFFNEY, SOUTH CAROLINA

PREPARED BY PETREX
A DIVISION OF NORTHEAST RESEARCH INSTITUTE, INC.

MARCH 8, 1989

INTRODUCTION

The Medley Farm site is located approximately six miles south of Gaffney, South Carolina and occupies about seven acres of the sixty-two acre farm parcel. The closed drum and waste disposal site is located on a flat portion of a hill with downward sloping land to the south and east. Disposal of solvent drums and other waste products reportedly began in 1973 and continued until June, 1976. Remediation of the site began in May, 1983, and was completed in June of the same year. Various investigative methods were also undertaken at later dates to determine the extent of contamination. One monitoring well was installed, sampled, and found to contain various concentrations of volatile organic compounds (VOCs). This report describes the results of the Petrex soil gas survey conducted in October, 1988 to help identify site contamination.

SURVEY OBJECTIVES

The objective of the Petrex survey was to delineate potential areas of residual soil contamination which may be present. The results of this survey will be used to help select optimum locations for direct soil sampling. Personnel of Sirrine Environmental Consultants reported that Dichloroethylene (DCE), Trichloroethylene (TCE), and Carbon Tetrachloride were the VOCs detected at the highest concentrations in the monitoring well located on the Medley Farm site.

SURVEY DESIGN

A total of 123 Petrex soil gas collectors was installed in the Medley Farm site

area. A high density grid pattern of samples spaced fifty feet apart was used

to concentrate on the most likely source areas based on historical data,

specifically the former drum storage and pond locations. A 100 foot grid

spacing was utilized outside of these areas for additional screening.

survey grid was designed by Sirrine Environmental Consultants.

COLLECTOR INSTALLATION AND RETRIEVAL

During sample collector installation, the site geologist noted soil with a

bluish tint between sample location 79 and 80. Near the same location were

several small areas where a plastic looking substance was noted. Also noted in

several areas of the site were metal drum lids, possibly remnants from

previously excavated waste barrels.

RESULTS

Several VOC's were identified in the soil gas collected at the Medley Farm

site. Six different compound maps were initially produced, which represent the

major compounds or classes of compounds which were identified. Per Sirrine's

instructions, the following four maps of individual or groups of contaminants

were finalized:

Plate 1: Tetrachloroethylene

Plate 2: Trichloroethylene

Plate 3: Aromatics C₆-C₁₅

Plate 4: Alkanes C2-C10

In addition, a sample location map is also provided as Plate 5.

The maps which were not finalized include toluene, and carbon tetrachloride and trichloroethane. As toluene is a C_7 aromatic hydrocarbon, its distribution is displayed in the C_6 - C_{15} aromatic map. Due to the mass spectral properties of carbon tetrachloride and trichloroethane, which make them difficult to differentiate, a combined map of these compounds was produced. However, the distribution of the soil gas signatures of these compounds was very similar to that of the other chlorinated solvents, and therefore it was determined that no significant additional information would be provided by this map.

Additional information regarding the Petrex soil gas method is included in Attachment 1.

DISCUSSION

The values on the maps represent the relative amounts detected for each of the identified compounds. Values for the same compound can be compared to distinguish potentially higher and lower contaminant levels. This information is useful for helping to identify source areas, migration pathways, migration directions, and the areal extent of contamination. Values for different compounds can not be directly compared.

The ability to detect various VOCs in soil gas is dependent upon various physiochemical properties of the materials involved. The physical characteristics of a particular compound (i.e., vapor pressure, solubility) will determine how it partitions into the vapor phase from the soil. Additionally, the chemical and physical nature of the local lithologies and soils will influence the behavior and composition of soil gases. Therefore, the detection of different contaminants through soil gas will vary. For example, tetrachloroethylene is more easily detected in soil gas, than is carbon tetrachloride under the same conditions.

The interpretation of soil gas data should be performed with some caution. The significance of one or two sample anomalies is often difficult to determine and groupings or patterns from multiple point anomalies are more informative. It has been our experience that one or two sample anomalies may represent highly localized point source contamination, or simply a small portion of a more extensive area of contamination. Multiple point anomalies may indicate probable source areas, broad contamination regions, or migration pathways, and are much easier to interpret.

The identification of the alkane and aromatic compounds was complicated by the presence of terpenes at about 36 collector locations. Terpenes are a class of organic compounds typically produced by local vegetation (i.e., pine trees). The mass spectral peaks for terpenes occur at mass assignments similar to the identified hydrocarbons. Due to this masking effect, not all hydrocarbon compounds could be positively identified at all collector locations. Sample locations with terpene interference have asterisks at their respective locations.

CONCLUSION

The maps produced show contourable patterns of soil gas VOCs directly in and around the former drum storage and pond areas. The individual maps show comparable anomalies, which may represent source areas of a quantity of residual solvents.

PETREX SOIL GAS PROTOCOL

ATTACHMENT 1

PETREX SOIL GAS PROTOCOL

INTRODUCTION

The Petrex Static Collection Technique provides a means by which trace quantities of subsurface derived organic compounds can be detected and collected at the earth's surface. It is integrative, thereby eliminating the short-term variations associated with other gas/vapor detection methods. The Petrex Technique directly collects and records a broad range of organic compounds emanating from subsurface sources.

SOIL GAS COLLECTOR PREPARATION

Soil gas collectors are prepared as follows:

- 1. Adsorption wires (after construction) are cleaned by heating to 358°C in a high vacuum system.
- 2. Wires are packed under an inert atmosphere in airtight tubes.
- One collector out of every thirty is checked for cleanliness by mass spectrometry. Based on the results, the group of thirty collectors is approved for release into the field.

SAMPLER SHIPMENT AND FIELD HANDLING

Five percent transportation blanks are included with each shipment.

Transportation blank samplers are stored unopened until analysis with the field samplers.

SOIL GAS COLLECTOR INSTALLATION

The collector consists of a ferromagnetic wire coated with an activated adsorbent. Each sample is typically placed in a shallow hole, 20-30 cm deep, within a protective container. The hole is backfilled and the location is marked. The collector is left in the ground for as long as 45 days, then retrieved and sealed in its container for transportation back to the laboratory for analysis.

MASS SPECTROMETER TUNING

An Extranuclear Quadrupole Mass Spectrometer equipped with a Curie-point pyrolysis/thermal desorption inlet is used for collector analysis. Mass assignment and resolution are manually adjusted using a perfluorotributylamine (PFTBA) standard. A linear correction, based on the known spectrum of PFTBA, is calculated. This correction is applied to a second PFTBA spectrum. If correct mass (M/Z) values are obtained, the operator proceeds to the next tuning step. If not, the procedure is repeated until correct masses are obtained.

Peak intensity ratios are set from the major peaks in the PFTBA spectrum using the following values:

Mass		Spectrum		
(M/Z)		Intensities		
69	=	100%		
131	=	25% ± 5%		
219	=	35% ± 5%		

During tuning, the ion signal for mass (M/Z) 69 of PFTBA is measured at a preset sample pressure and detector voltage and compared to previous values at the same setting.

Electron energy is set to 70 electron volts and emission is set at 12 milliseconds. All other operating parameters, such as scans, scan range, and mass offset, are established in the computer program. These values may only be changed by the laboratory manager.

Tuning is performed at the beginning of a run so that an individual survey is analyzed at the same set of instrument conditions. The samples are analyzed in random order.

LABORATORY ANALYSIS

Machine background analyses are performed periodically (approximately every 20 samples) to assure that there is no carryover between successive samples. If there are peaks which are not related to atmospheric gases, the supervisor is notified and the mass spectrometer is shut down and cleaned as necessary.

A written sample number record is kept during the analysis to prevent accidental sample number duplication. The mass spectrometer control program contains appropriate "flag statements" that prompt the operator with a warning if an input sample number has already been analyzed. The operator then checks the current number, along with the disk storage location of the previously entered number to identify the true sample number.

COMPOUND IDENTIFICATION

Compound identification is based on molecular weight, compound fragmentation, and isotope distribution, as applicable. Each compound exhibits a unique mass spectral signature. NERI/Petrex maintains a large library of spectra for individual compounds, accessible by computer. In addition, the company maintains a large library of commonly used chemical mixtures, e.g., gasolines, diesels, industrial oils and solvents, coatings, and plastics. These are used to assist in both compound and mixture identifications.

Indicator peaks, indicative of the compound and away from interference by other compounds, are selected for data presentation and mapping.

RELATIVE FILIX DETERMINATION

The process of determining ion counts (fluxes) of indicator peaks for the specified compounds is totally computerized. Sample locations on a base map are digitized as X-Y coordinates and flux data for the given compounds are plotted at respective locations. All flux data are then extracted from the original data file for subsequent processing.

Mapping of the relative flux data occurs after contour intervals for each compound or component class are determined. In order to establish the contour intervals, factors such as flux distribution, physiochemical considerations, and component-source material relationship (if known) are taken into account for each compound or class, in each area, on an individual basis. Each map is then contoured by hand, or in special cases, computer contoured. The resultant contour zones for each compound or component in each area are color-coded on a relative basis.

It should be noted that the reported ion counts are representative of a flux which is proportional to the component's emanation rate at a particular sample location and is not a measure of concentration. Flux values for one compound cannot be quantitatively compared to flux values for different compounds. At this time, there has been no absolute equation established from which subsurface compound concentrations can be calculated from surficial flux levels.

PETREX FIELD INSTRUCTIONS

***** WARNING ****

IF THESE INSTRUCTIONS ARE NOT READ COMPLETELY AND FOLLOWED THOROUGHLY
THE SURVEY RESULTS MAY BE SERIOUSLY COMPROMISED

PLEASE CALL PETREX FIELD PERSONNEL IF YOU HAVE ANY QUESTIONS:
(303) 238-0090
or

or (203) **677-9**666

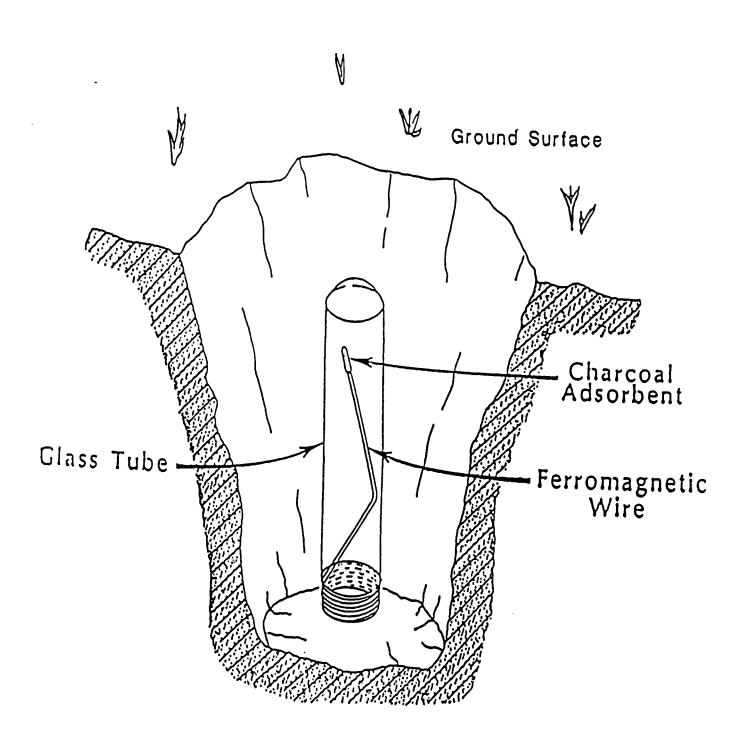
**** CAUTION ****

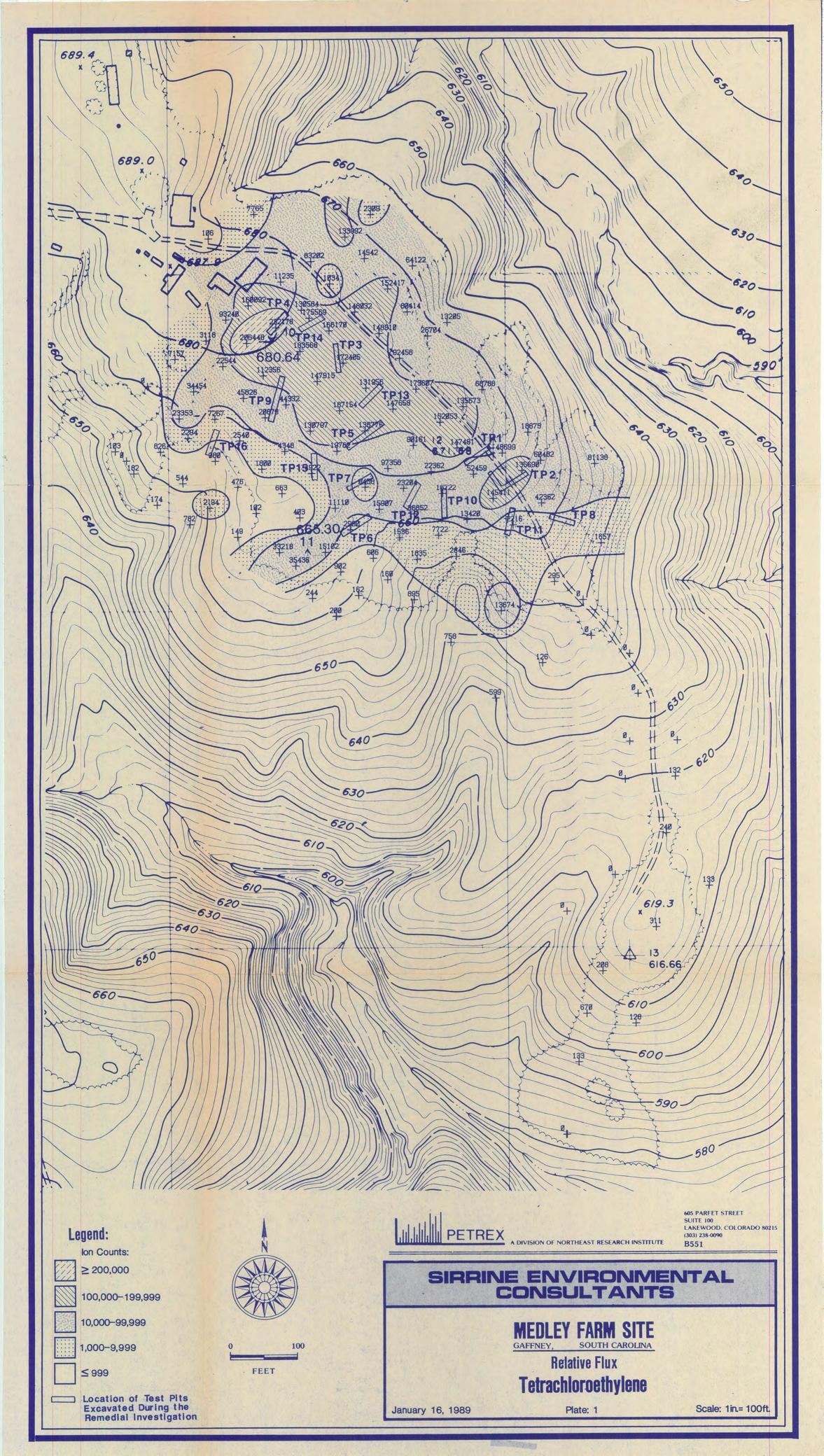
The most critical aspect of collector placement is to prevent exposing the collector to contaminants other than those in the soil gas. Smoking around the collectors, even when sealed, may contaminate them. Hands <u>MUST</u> be kept free of organics, including insect repellent, sunblock, gasoline, motor oil, cosmetics, smoke residues, etc. The lip and inside of the tubes, caps, and cap liner must not contact any contaminants.

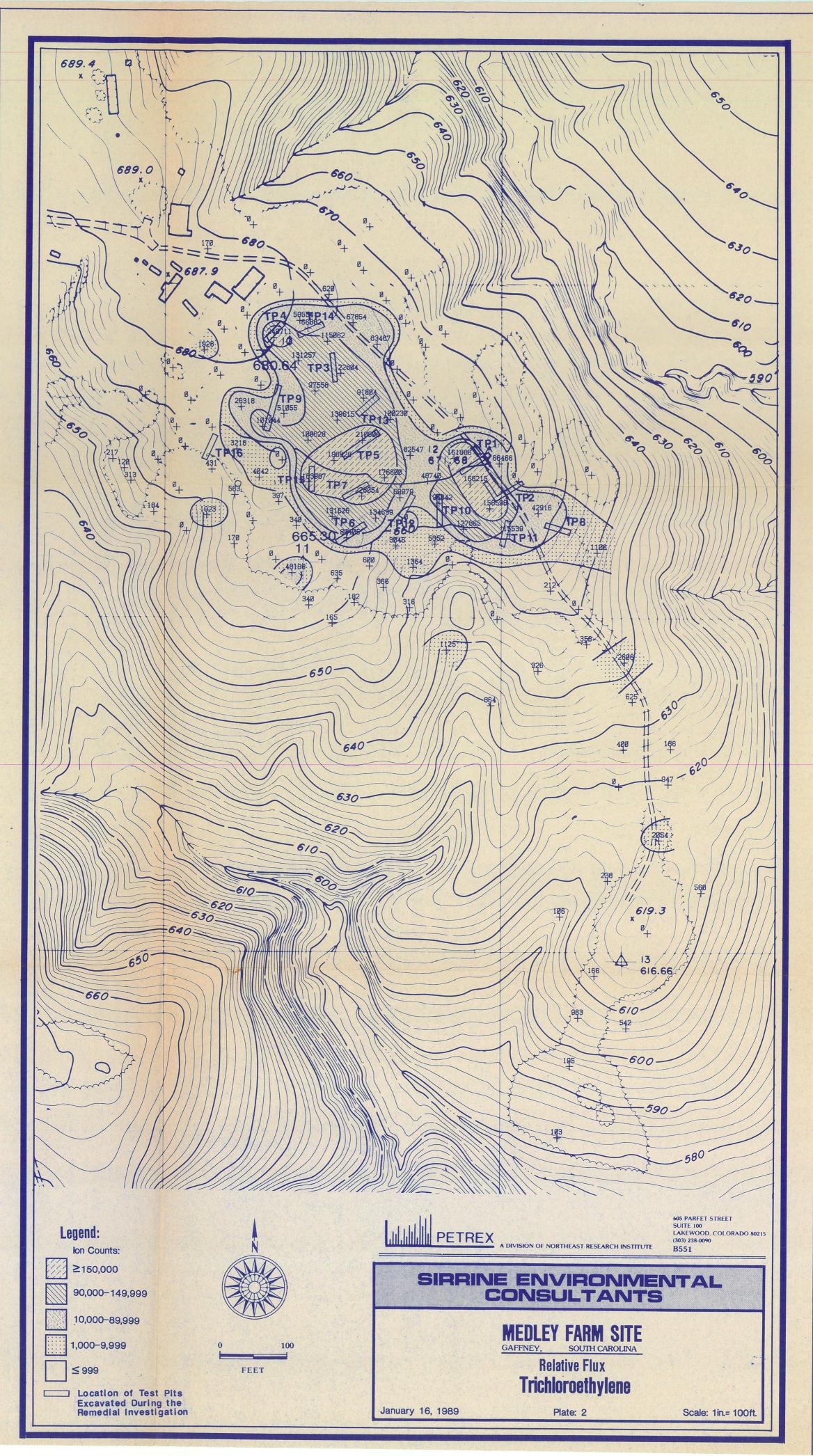
<u>Storage</u> - Tubes must be stored in a clean area away from contaminants. <u>DO NOT</u> store near gasoline cans, oily rags, etc. <u>DO NOT</u> smoke in the same room collectors are stored in. Keep collectors away from exhaust fumes.

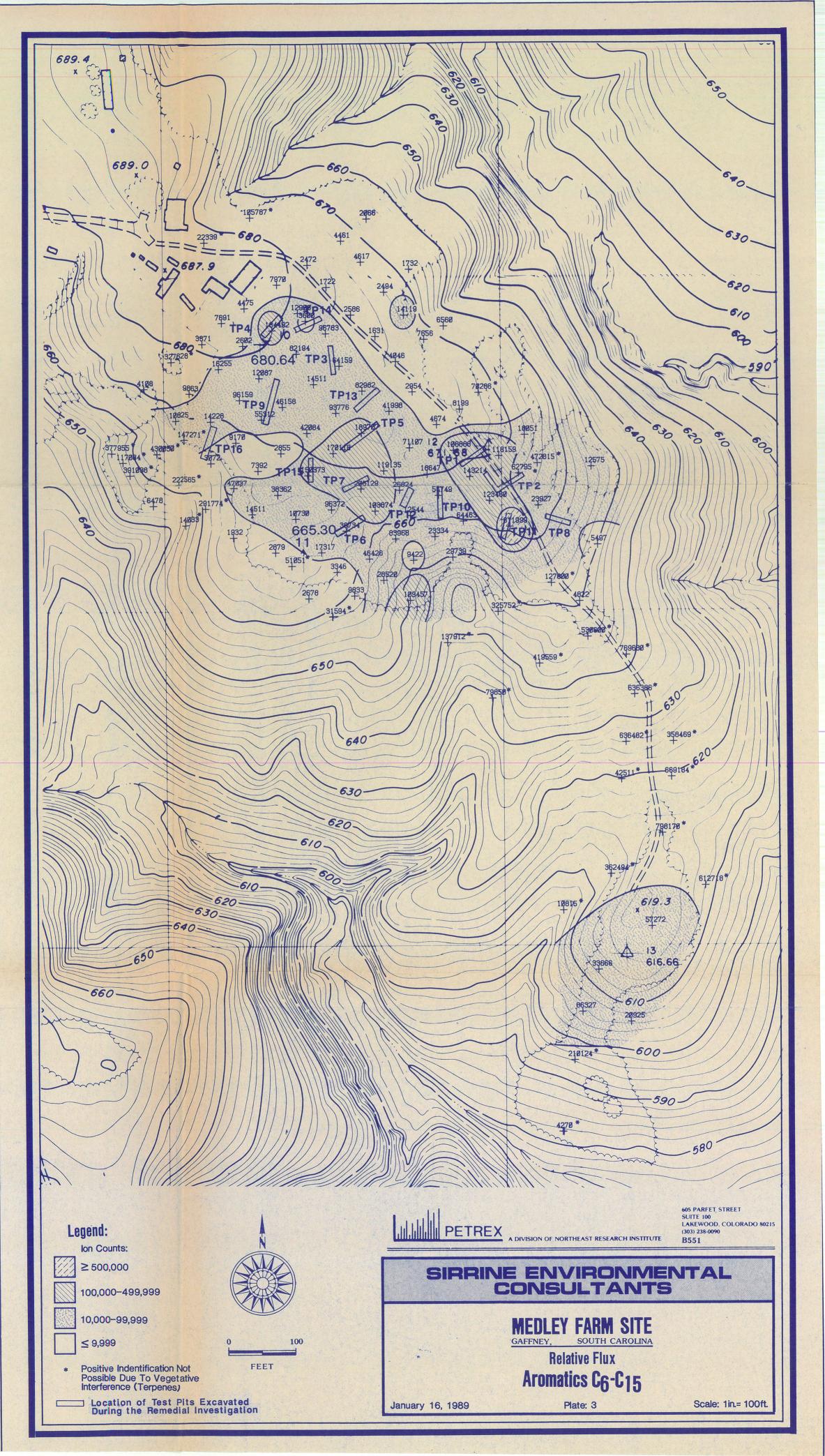
<u>Rainfall</u> - If there is a high influx of water (rain, snow melt, etc.) in the area it may disturb the soil gas equilibrium and reduce soil gas collection. Please contact Petrex if high water influx is anticipated or has already occurred.

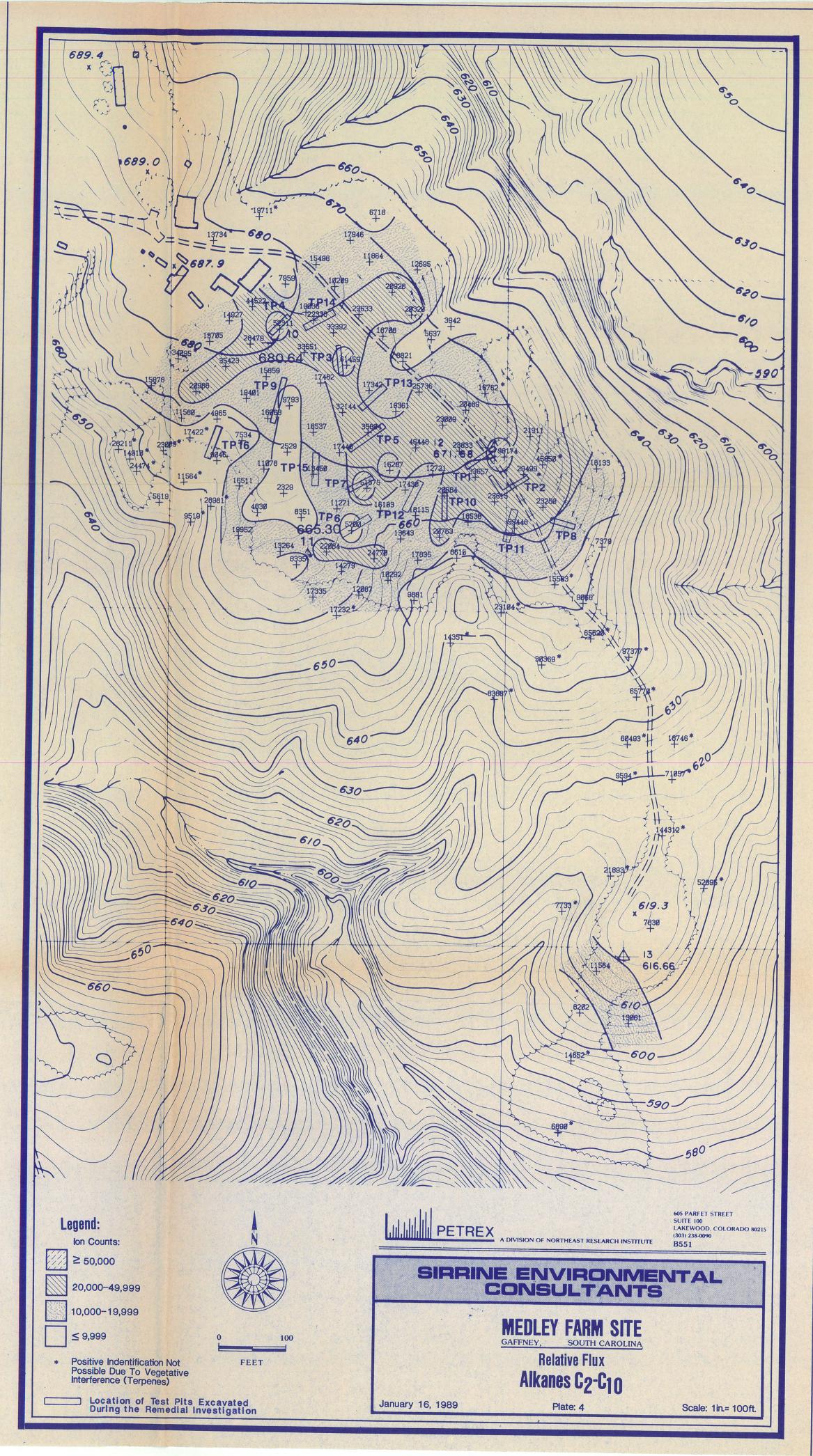
- 1) Dig sample location 10-12 inches deep and approximately 2-4 inches in diameter. Do not contaminate the soil.
- 2) Remove the cap. If the black liner has stuck to tube lip, remove it and immediately place sampler (vertically with open end down) into sample location hole. The sampler tube must be at least two inches below ground surface. Immediately cover the sampler with soil.
- 3) If the black liner has come out of the cap, replace it and return the cap to one of the clean plastic bags provided.
- 4) Mark the sample location with flagging or other material. Note the sample location on a base map and enter information in a field notebook.
- 5) Retrieving samples (should be done at the recommended time intervals).
 - (A) Remove the soil until tube is exposed.
 - (B) Take a cap from sealed plastic bag. Check for black liner inside cap. If liner has fallen out, replace it.
 - (C) Remove tube from the hole. If wire falls out of tube or if tube is broken, use tweezers to handle wire.
 - (D) Wipe off the tube and threads thoroughly with a clean, dry cloth. If the tube threads and lip are not properly cleaned, the cap will not seal and the sample will become contaminated.
 - (E) Seal tube with cap making sure the black liner is seated to tube lip. If cap does not thread easily, use a different cap. Cap must be sealed tightly against liner.
 - (F) Place sticker on <u>cap</u> top and number. Number sequentially starting with 1. Use <u>only</u> numbers to identify samples. For two wire samplers, use two consecutive numbers. Please underline all numbers for easy identification. Do not duplicate cap numbers.
 - (G) Record number or numbers of sampler corresponding to location on base map and field notebook.
 - (H) Do not place tape, sticker, or glue on glass tube. Stickers provided will adhere if placed on dry cap.
- 6) When packaging exposed tubes, please do not use Styrofoam or popcorn packing as this can potentially introduce a contaminant. Enclose tubes in two plastic bags as provided and wrap each package tightly with bubble wrap.

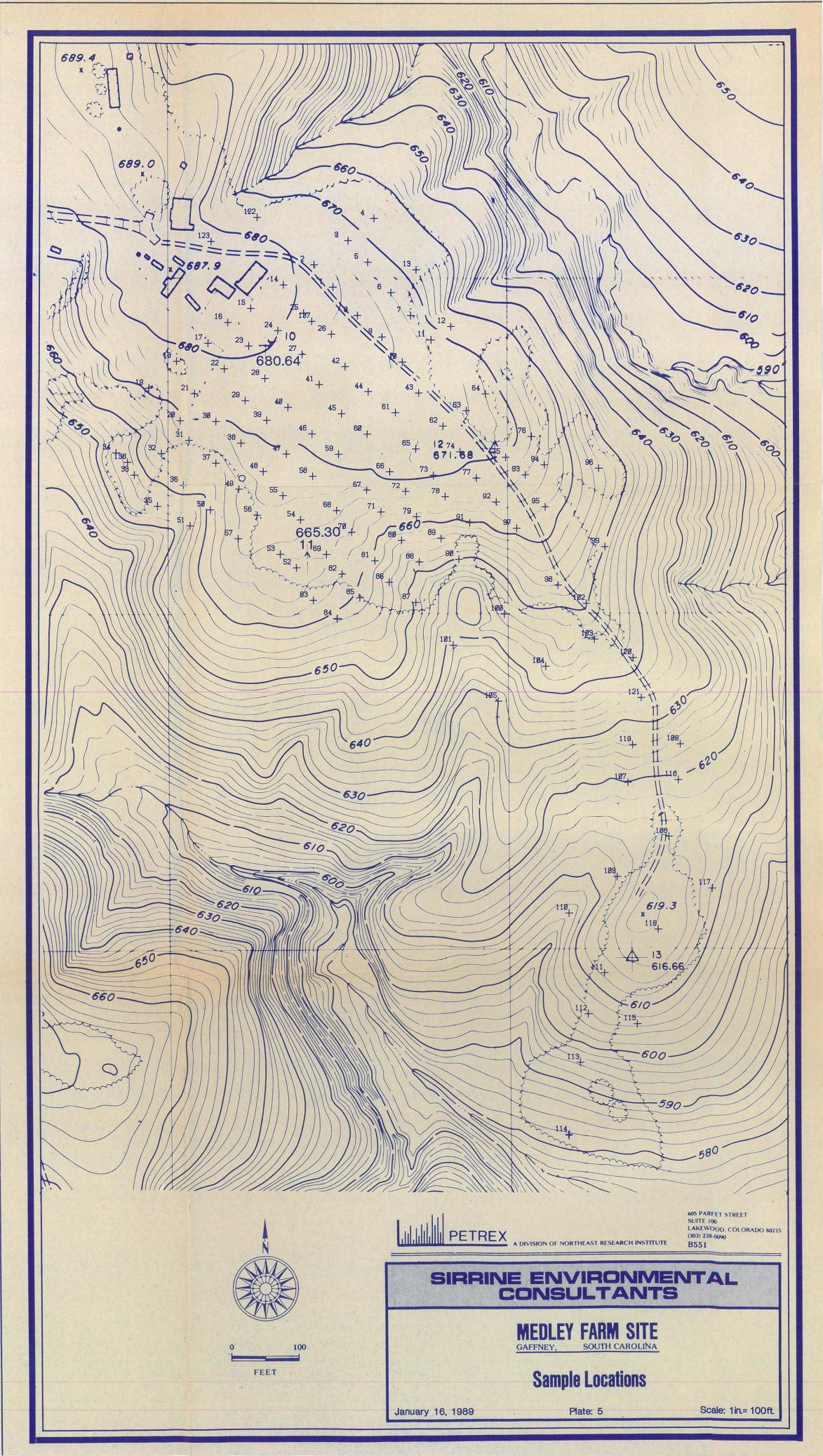












APPENDIX C
TEST PIT REPORTS

	2	IRR	NINE —			
	EN'	VIRONI		EST PIT REPORT	TEST PIT NO. TP1	
	NT:		MEDLEY FARM	MS SITE REMEDIAL INVESTIGATION M STEERING COMMITTEE UBBER TIRE BACK-HOE		LAN FT. B. 1989 B. 1989
DEPTH (FT)	SAMPLE NO./ DEPTH RANGE	CHANGE		FIELD CLASSIFICATION	REMARK	(S
		0.0 0.5 0.5		silt, little fine sand, few fine gravel. Roots es mixed in with soil. Abundant small -TOPSOIL-	Monitored with OV excavation. No organic vapors	•
-1 -		1.5		e, mostly silty clay, trace fine sand, trace ertical fractures visible below soil -	detected in breathing excavating. Organic vapors we	zone while
-2 -	•		<u> </u>	ottom Of Exploration 10.0 ft.	in breathing zone wheexcavating.	lie
_3 _					Water was seeping fractures located just topsoil - clay interfac- end of pit.	t below
_, _					Trench excavated to because no fill detect natural clay below to discoloration noted et topsoil	ted, only psoil. No
-4 -						
- 5 -						
-6 -						
					ASTM COMPONE	ENT %
7 -					SOME 3 LITTLE 1 FEW 5	0 - 100 % 0 - 45 % 5 - 25 % - 10 % 5 %
		UND WA		PIT DIMENSI	ONS (FT)	
2/22/8		1350	DEPTH FT. 1.5	52 x 2.5 x 1.5	= 195 c	U. FT.
				BOULD 12 INCH TO 18 INCH DIAM: NO. OVER 18 INCH DIAM: NO.	= VOL. = VOL.	CU. FT.

TEST PIT NO.

TP1

* HRS. AFTER COMPLETION

NOT ENCOUNTERED

ENVIR	RRI ONME ULTAN			ST PIT REPORT	TEST PIT NO. TP2
	IT:		MEDLEY FAR	MS SITE REMEDIAL INVESTIGATION M STEERING COMMITTEE RUBBER TIRE BACK-HOE	JOB NO: G-8026 LOCATION: SEE PLAN ELEVATION: 665 FT. DATE START: 22 FEB. 1989 DATE FINISH: 22 FEB. 1989 LOGGED BY: C. BUDINGER
DEPTH (FT)	SAMPLE NOJ DEPTH RANGE	STRATA CHANGE (FT)		FIELD CLASSIFICATION	REMARKS
-1 - -2 - -3 - -4 -		2.0 3.0	some silt, few figranular fraction assess fines consisted the sand, trace fine sand, which is some silt of the sand, trace fine sand, trace fi	eddish - purple to yellowish brown sand, ne to coarse gravel, few clay. Fines and n of soil saturated with dye - difficult to ntents due to this. Detritus occurring in fill - FILL - ge to reddish - brown, mostly silt, clay, trace fine gravel. Little small mica flakes. - RESIDUAL SOIL - erately severely weathered, pale yellow, ca schist; rough, tight, steeply dipping	trench; low readings in easterly trending section. • Weathered bedrock extended from 2 to 3 feet
-6 -					ASTM COMPONENT %
7 -					MOSTLY 50 - 100 % SOME 30 - 45 % LITTLE 15 - 25 % FEW 5 - 10 % TRACE < 5 %
	GRO	UND WA	TER	PIT DIMENSIO	DNS (FT)
2/22/		пме · 0.25	DEPTH FT.	x 3 x 3 (D	= 306 CU. FT.
NOT EN	COUNTERE	□ NE	' HRS. AFTER	BOULDE 12 INCH TO 18 INCH DIAM: NO. (RS) = VOL. 0 CU. FT. 2 VOL. 0 CU. FT. TEST PIT NO. TP2

.

SIF	₹RI	NE	- -		T
	ONME		TES	ST PIT REPORT	TEST PIT NO. TP3
				MS SITE REMEDIAL INVESTIGATION M STEERING COMMITTEE RUBBER TIRE BACK-HOE	JOB NO: G-8026 LOCATION: SEE PLAN ELEVATION: 676 FT. DATE START: 20 FEB. 1989 DATE FINISH: 20 FEB. 1989 LOGGED BY: C. BUDINGER
DEPTH (FT)	SAMPLE NO/ DEPTH RANGE	STRATA CHANGE (FT)		FIELD CLASSIFICATION	REMARKS
-1 - -2 -	TP3	2.2	silty clay, little s bright yellow sa detritus (grass, occasional quar bottom of fill ma	prown and greenish - gray mottled, mostly sand. Pockets of purple silty sand and and in a few places. Layers of matted leaves, twigs) interbedded with fill material rtz gravel (coarse). Plastic sheets lined aterial at northern area of trench. Gummy termixed with plastic sheeting. - FILL -	20 to 30 ppm in breathing
-3-		3.3		n, mottled grayish yellow, mostly silty clay, dium sand, few fine gravel; very stiff clay. - RESIDUAL SOIL -	of pit walls for TCL/TAL
- 4 -			Bottom	of exploration at 3.3 feet.	
-5 -					
-6 -					
	, !	1			ASTM COMPONENT %
-7 -					MOSTLY 50 - 100 % SOME 30 - 45 % LITTLE 15 - 25 % FEW 5 - 10 % TRACE < 5 %
	GRO	UND WA	TER	PIT DIMENSIO	ONS (FT)
2/20/		TIME * 0.25	0€PTH FT.	34 x 7 x 3.5 (D)	= <u>833</u> CU. FT.
NOT ENC	COUNTERE	NE	· HRS. AFTER	BOULDE 12 INCH TO 18 INCH DIAM: NO. 0 OVER 18 INCH DIAM: NO. 0) = VOL. 0 CU. FT.

NVIR	ONME ULTAI			ST PIT REPORT		TEST PIT NO. TP4
	IT:		MEDLEY FAR FENN - VAÇ	MS SITE REMEDIAL INVESTIGA M STEERING COMMITTEE RUBBER TIRE BACK-HOE	TION	JOB NO: G-8026 LOCATION: SEE PLAN ELEVATION: 680 FT. DATE START: 16 FEB. 1989 DATE FINISH: 16 FEB. 1989 LOGGED BY: J. CHAMNESS
DEPTH (FT)	SAMPLE NOJ DEPTH RANGE	STRATA CHANGE (FT)		FIELD CLASSIFICATION		REMARKS
-1 - -2 - -3 - -5 -	TP4-1	2.5	Mottled red - br white, purple ar clay and silt, so trace gravel; co feet of this laye materials; 4 or gallon drum en apart complete Silty Clay (CL) Red - brown, sl hard.	own and gray with occasional yellond black patches, mostly intermixed me fine sand, few to little organic contaminated soils concentrated in lor; occasional pockets of gummy gluster of drum lids encountered; one compountered near north end of pit - drum lids encountered. - FILL - ightly mottled, mostly silty clay, few - RESIDUAL	d silty debris, ower 1.5 ue like olete 55 rum fell v sand;	Monitored with OVA during excavation. Organic vapor levels when pit was initially opened generally fluctuated between 30 and 40 ppm in the pit and immediately downwind. Peaks off pit walls were as high as 100 ppm. Composite sample collected from dressed areas of pit walls for TCL/TAL analyses.
		•				ASTM COMPONENT %
-7 -						MOSTLY 50 - 100 % SOME 30 - 45 % LITTLE 15 - 25 % FEW 5 - 10 % TRACE < 5 %
	GRO	UND WA	TER	PIT C	DIMENSIO	NS (FT)
2/16/		TIME * 0.25	DEPTH FT.	39 x 5 (W)	x <u>5</u>	= 975 CU.FT.
NOT ENG	OUNTERE	D NE	* HRS. AFTER	12 INCH TO 18 INCH DIAM: N	BOULDEF O. 0 O. 0	= VOL. 0 CU. FT. = VOL. 0 CU. FT. TEST PIT NO. TP4

SIF ENVIR CONS	ONME			ST PIT REPORT	TEST PIT NO. TP5
				MS SITE REMEDIAL INVESTIGATION M STEERING COMMITTEE RUBBER TIRE BACK-HOE	JOB NO: G-8026 LOCATION: SEE PLAN ELEVATION: 671 FT. DATE START: 23 FEB. 1989 DATE FINISH: 23 FEB. 1989 LOGGED BY: C. BUDINGER
DEPTH (FT)	SAMPLE NOJ DEPTH RANGE	STRATA CHANGE (FT)		FIELD CLASSIFICATION	REMARKS
-1 -		0.0	and brown, most Overlapping an inches) of matter underlying silty (GW). On east	es of reddish - orange, tannish - yellow stly silt, few fine sand, trace gravel. d interbedded matted layers (0.1 to 0.2 ed leaves and grasses. On edges fill is well, rounded fine to coarse gravel end is black, well - rounded fine gravel et flyash or road - grade asphalt. Plastic	 Monitored with OVA during excavation. Voids from old decayed 55 gal drums observed. No organic vapors detected in breathing zone. Readings from trench walls ranged to 15 ppm.
-3-					
- 4 -		3.5		- orange, silty clay, trace fine sand. e gravel to small cobble (quartz).	
-5 -		4.5	Bot	tom of exploration at 4.5 feet.	
-6 -					
-7-					ASTM COMPONENT % MOSTLY 50 - 100 % SOME 30 - 45 % LITTLE 15 - 25 % FEW 5 - 10 % TRACE < 5 %
	GRO	UND WA	TER	PIT DIMENSIO	DNS (FT)
2/23/		TIME •	DEPTH FT.	63 x 4.0 x 4.5 (W) (D	= 1134 CU. FT.
NOT ENC	COUNTERS		* HRS. AFTER	BOULDE 12 INCH TO 18 INCH DIAM: NO. 0 OVER 18 INCH DIAM: NO. 0	RS) = VOL. 0 CU. FT.) = VOL. 0 CU. FT. TEST PIT NO. TP5

NVIR	ONME ULTAI			ST PIT REPORT	TEST PIT NO. TP6
PROJ	FCT:		MEDI EY FAR	MS SITE REMEDIAL INVESTIGATION	JOB NO: G-8026
CLIEN				M STEERING COMMITTEE	LOCATION: SEE PLAN ELEVATION: 664 FT.
	RACTO		FENN - VAC		DATE START:23 FEB. 1989
EQUIF	PMENT	USED:	CASE 480 E R	UBBER TIRE BACK-HOE	DATE FINISH: 23 FEB. 1989 LOGGED BY: C. BUDINGER
DEPTH (FT)	SAMPLE NO./ DEPTH RANGE	STRATA CHANGE (FT)	,	FIELD CLASSIFICATION	REMARKS
		0.0 0.5	Sandy Silt (ML Brown, mostly s leaves, a few pl	sandy silt, trace clay, trace gravel. Roots, astic bags.	Monitored with OVA durin excavation.
-1 -	;		Silt (ML)	- TOPSOIL orange, mostly silt, few clay, trace sand,	No organic vapors detected in breathing space.
			trace gravel.	- orange, mostly silt, few clay, trace sand,	 No lagoon - type structure observed.
-2 -				·	Composite sample collected from dressed area of pit walls in fill areas.
ł		2.5	Botton	n of Exploration at 2.5 feet.	or pit waits in fill areas.
-3 -					
4					
-5 -					
-6 -					
					ASTM COMPONENT %
7 -					MOSTLY 50 - 100 % SOME 30 - 45 % LITTLE 15 - 25 % FEW 5 - 10 % TRACE < 5 %
	GRO	UND W	TER	PIT DIMENSIO	ONS (FT)
DATE 2/23/8		TIME .	DEPTH FT.	40 x 2.5 x 2.5 (W)	= 250 CU. FT.
				BOULDE 12 INCH TO 18 INCH DIAM: NO. (::RS) = VOL. 0 CU.FT.
40T ENC	OUNTERE	D NE	* HRS. AFTER COMPLETION	OVER 18 INCH DIAM: NO.	TEST PIT NO. TP6

SIF ENVIR CONS	ONME			ST PIT REPORT	TEST PIT NO. TP7
	IT:		MEDLEY FAR FENN - VAC	MS SITE REMEDIAL INVESTIGATION M STEERING COMMITTEE RUBBER TIRE BACK-HOE	JOB NO: G-8026 LOCATION: SEE PLAN ELEVATION: 668 FT. DATE START: 22 FEB. 1989 DATE FINISH: 22 FEB. 1989 LOGGED BY: C. BUDINGER
DEPTH (FT)	BAMPLE NO/ DEPTH RANGE	STRATA CHANGE (FT)		FIELD CLASSIFICATION	REMARKS
-1 - -2 - -3 - -5 -		0.0 0.1 0.5 0.5	Interlayered red silt and green - grasses noted a Clayey Silt (MI Reddish - orang rounded gravel	- FILL -	Monitored with OVA during excavation. No organic vapors detected in breathing zone. One sampling location registered 4 ppm on OVA. Water seeping out of fracture below topsoil - residual interface at one location in middle of trench. Composite sample collected from dressed areas of pit walls for TCL/TAL analyses from fill locations. ASTM COMPONENT % MOSTLY 50 - 100 % SOME 30 - 45 % LITTLE 15 - 25 % FEW 5 - 10 % TRACE < 5 %
	GRO	UND WA	TER	PIT DIMENSIO	DNS (FT)
2/22/8		1600	DEPTH FT. 1.0-1.5		= 345 CU. FT.
NOT ENC	OUNTERE	D .	* HRS. AFTER COMPLETION	BOULDE 12 INCH TO 18 INCH DIAM: NO. (OVER 18 INCH DIAM: NO. (TEST PIT NO. TP7

2112		NE	• •		
ENVIR	ONME	NTAL		PIT REPORT	TEST PIT NO. TP8
				TE REMEDIAL INVESTIGATION EERING COMMITTEE ER TIRE BACK-HOE	JOB NO: G-8026 LOCATION: SEE PLAN ELEVATION: 658 FT. DATE START: 23 FEB. 1989 DATE FINISH: 23 FEB. 1989 LOGGED BY: C. BUDINGER
DEPTH (FT)	SAMPLE NO/ DEPTH RANGE	STRATA CHANGE (FT)	FIEL	D CLASSIFICATION	REMARKS
		0.0 0.25	Sandy Silt (ML) Brown, sandy silt, trac	ce clay. Roots and leaves TOPSOIL -	Monitored with OVA during excavation.
-1 -			Hard to soft, severely weathered, light brow yellow and orange, fin grained Schist; tight, rough, steeply dippin	n, Reddish - orange, moist clayey silt, trace fine sand, few mica flakes, occasiona well - rounded fine gravel	Organic vapors not detected by OVA in breathing zone when residual soil section of test pit was excavated.
-2-	.	2.5	joints (relict bedding) SAPROLITE -	(quartz), few clay RESIDUAL SOIL	Organic vapors detected in weathered schist at 4 ppm in breathing zone.
-3-		2.5	Bottom	of Exploration at 2.5 feet.	Pit was excavated through soil and weathered bedrock. High angle contact between weathered schist (saprolite) and residual soil exposed in test pit.
- 4 -					No fill or lagoon - type feature noted.
-5-					Composite sample taken from clayey sections of weathered schist for TCL/TAL analysis.
-6 -					
					ASTM COMPONENT %
-7-					MOSTLY 50 - 100 % SOME 30 - 45 % LITTLE 15 - 25 % FEW 5 - 10 % TRACE < 5 %
	GRO	UND WA	TER	PIT DIMENS	IONS (FT)
2/23		0.25	DEPTH FT.		D)
				BOULD 12 INCH TO 18 INCH DIAM: NO. OVER 18 INCH DIAM: NO.	0 = VOL. 0 CU. FT. 0 CU. FT.
NOT EN	OUNTERE	₽ NE	' HRS. AFTER		TEST PIT NO TP8

SIRRINE		
ENVIRONMENTAL CONSULTANTS	TEST PIT REPORT	TEST PIT NO. TP9
PROJECT: CLIENT: CONTRACTOR: EQUIPMENT USED	MEDLEY FARMS SITE REMEDIAL INVESTIGATION MEDLEY FARM STEERING COMMITTEE FENN - VAC CASE 480 E RUBBER TIRE BACK-HOE	JOB NO: G-8026 LOCATION: SEE PLAN ELEVATION: 674 FT. DATE START: 7 MAR.1989 DATE FINISH: 7 MAR. 1989 LOGGED BY: C. BUDINGER
DEPTH NOJ (FT) DEPTH CHANGE RANGE (FT)	FIELD CLASSIFICATION	REMARKS
0.0 0.3 0.3	Silty Sand (SM) Brown - gray, moist, mostly fine sand, some silt, few medium to coarse sand with numerous roots and occasional pockets of yellow and purple stained soils. Gray ash - like material present TOPSOIL / FILL -	 Monitored with OVA during excavation. No organic vapors were detected in breathing zone.
2.0	Silty Clay (CL) Mottled red - brown and yellow - brown, slightly moist, mostly silty clay, few sand, trace quartz gravel.	
2.0	- FILL / RESIDUAL SOIL - Silty Clay (CL) Dense, red - brown, moist, mostly silty clay, trace to few sand, occasional quartz gravel RESIDUAL SOIL -	
3.5	Bottom of exploration at 3.5 feet.	
4-		
-5 -		
-6 -		
7 -		MOSTLY 50 - 100 % SOME 30 - 45 % LITTLE 15 - 25 % FEW 5 - 10 % TRACE < 5 %
GROUND W/ DATE TIME * 3/7/89 0.25	DEPTH FT. 75 x 3.0 x 3.5 (L) (W) (D	= 787.5 CU. FT.
NOT ENCOUNTERED NE	12 INCH TO 18 INCH DIAM: NO. (OVER 18 INCH DIAM: NO. (RS) = VOL. 0 CU. FT. = VOL. 0 CU. FT. TEST PT NO. TP9

ENVIR	RII ONMEI ULTAN	NTAL	_	ST PIT REPORT	TEST PIT NO. TP10
CLIEN	RACTO		MEDLEY FAR	RMS SITE REMEDIAL INVESTIGATION RM STEERING COMMITTEE RUBBER TIRE BACK-HOE	JOB NO: G-8026 LOCATION: SEE PLAN ELEVATION: 664 FT. DATE START: 8 MAR.1989 DATE FINISH: 8 MAR. 1989 LOGGED BY: C_ BUDINGER
DEPTH (FT)	SAMPLE NO/ DEPTH RANGE	STRATA CHANGE (FT)		FIELD CLASSIFICATION	REMARKS
-1 -		0.0 0.3 0.3	Silt With Grave Loose, reddish fine, rounded g	brown with purple zones, mostly gravel, see sand, some silt, trace clay. - TOPSOIL / FILL -	Monitored with OVA during excavation. No organic vapors were detected in breathing zone.
-3-		2.5		L-CL) - orange, moist, mostly silt, some clay, vith occasional coarse gravel or cobble SAPROLITE -	
- 4 -			Bott	om of exploration at 3.0 feet.	
-5 -					
-6 -		į			
-7-					ASTM COMPONENT % MOSTLY 50 - 100 % SOME 30 - 45 % LITTLE 15 - 25 % FEW 5 - 10 % TRACE < 5 %
DATE		JND WA	TER DEPTH FT.	PIT DIMENSI 	
3/8/8	9	0.25	0.5-3.0	(L) (W) (I	D) .
NOT ENG	OUNTERE	<u> </u>	* HRS. AFTER COMPLETION		0 = VOL. 0 CU. FT. 0 = VOL. 0 CU. FT. TEST PIT NO. TP 10

		NE	TEC	ST PIT REPORT	TEST PIT NO. TP 11	
ENVIRONMENTAL CONSULTANTS		1 = 3	OI FII NEPUNI			
PROJECT: MEDLEY FARI			MEDLEY FARM		JOB NO: G-8026 LOCATION: SEE PLAN	
CLIE				STEERING COMMITTEE	ELEVATION: 661	
	PACTO		E. D. & S., INC.	BBER TIRE BACK-HOE	DATE START: 12/15/89 DATE FINISH: 12/15/89	
Laci	- WI-141	OJLD.	<u> </u>	DELI IIIE DANK IIVE	LOGGED BY: R. L. BURDINE	
DEPTH (FT)	SAMPLE NO/ DEPTH RANGE	STRATA CHANGE (FT)		FIELD CLASSIFICATION	REMARKS	
-1 -			Note: Surface topsoil	e erosion in this area; very little to no	 Monitored with OVA during excavation No Organic Vapors were detected in breathing zone while excavating. But there is a strong organic odor. 	
-2-			SILTY CLAY Dense, reddis some silt, little	sh-orange, slightly moist, mostly clay,	 Vertical rock layer at 12.5 ft. North end of pit. Rock is a Mica Schist. The layer is .8 ft. wide. 	
		1		-RESIDUAL SOIL-		
-3-					Sampled for volatile organics and semi-volatile organics.	
- 4 -						
-5 -						
			вотто	OM OF EXPLORATION AT 5.5 FT.	7	
-6						
					ASTM COMPONENT %	
- 7 -					MOSTLY 50 - 100 % SOME 30 - 45 % LITTLE 15 - 25 % FEW 5 - 10 % TRACE < 5 %	
	GRO	UND WAT	TER	PIT DIMENS	ions (FT)	
DAT		TIME .	DEPTH FT.	32 x2.5 x 5.		
12/15/	89	•-	<u>.</u>		(D)	
		···· · · · · · · · · · · · · · · · · ·	_	BOULD	DERS	
				12 INCH TO 18 INCH DIAM: NO	0 = VOL. 0 CU. FT. CU. FT.	
NOT EN	OUNTERE	Δ X	* HRS. AFTER		TEST PIT NO. TP 11	

2112	RI	NE	'		
ENVIR	ONME	NTAL	TES	ST PIT REPORT	TEST PIT NO. TP 12
CLIE	RACTO	DR: USED:	E. D. & S., INC.	STEERING COMMITTEE	JOB NO: G-8026 LOCATION: SEE PLAN ELEVATION: 664 DATE START: 12/15/89 DATE FINISH: 12/15/89 LOGGED BY: R. L. BURDINE
DEPTH (FT)	SAMPLE NO./ DEPTH RANGE	STRATA CHANGE (FT)		FIELD CLASSIFICATION	REMARKS
-1 - -2 - -3 -			SILT (ML) Loose, tan, s sand. SILTY CLAY Dense, reddi silt, trace mic	n, slightly moist, mostly silt, some clay, d; rootlets and organic debris from -TOPSOIL- lightly moist, mostly silt, little clay, little fine -Possibly fill (Appears Disturbed)- (CL) sh-orange, slightly moist, mostly clay, little	 Monitored with OVA during excavation No Organic Vapors were detected in breathing zone while excavating. Some purple staining at surface inTopsoil. Sampled for volatile organics and semi-volatile. Water seeping into pit from various locations throughout the pit. It appears most seeps are located between 1.0 to 2.5 ft.
-5 -					
- 6 -					
					ASTM COMPONENT %
-7 -					MOSTLY 50 - 100 % SOME 30 - 45 % LITTLE 15 - 25 % FEW 5 - 10 % TRACE < 5 %
	GRO	JND WAT	rer	PIT DIMENSIO	ONS (FT)
12/15		TIME .	DEPTH FT.	35 x 2.5 x 4.5 (E)	
			• HRS. AFTER	BOULDE 12 INCH TO 18 INCH DIAM: NO. 0 OVER 18 INCH DIAM: NO. 0) = VOL. 0 CU. FT.
NOT ENG	OUNTERE	D Y	1/2 COMPLETION		TEST DIT NO TP 12

2112		INE	· · · · · · · · · · · · · · · · · · ·		
ENVIR	ONME	NTAL		ST PIT REPORT	TEST PIT NO. TP 13
CLIE	RACT		E. D. & S., INC.	S RI/FS STEERING COMMITTEE BBER TIRE BACK-HOE	JOB NO: G-8026 LOCATION: SEE PLAN ELEVATION: 676 DATE START: 12/15/89 DATE FINISH: 12/15/89 LOGGED BY: R. L. BURDINE
DEPTH (FT)	SAMPLE NO/ DEPTH RANGE	STRATA CHANGE (FT)		FIELD CLASSIFICATION	REMARKS
-1 -			organic debris SILTY CLAY Mottled reddi	(CL) sh-orange and tan, slightly moist, mostly	Monitored with OVA during excavation No Organic Vapors were detected in breathing zone
			clay, some si	it, trace quartz, gravelFILL-	while excavating.
- 2 -					_
-3-			SILTY CLAY Dense, reddi silt, trace mid	sh-orange, slightly moist, mostly clay, little a.	9
- 4 -				-RESIDUAL SOIL-	
-5 -					·
-6 -	_		вотто	OM OF EXPLORATION AT 6.2 FT.	
					ASTM COMPONENT %
-7 -					MOSTLY 50 - 100 % SOME 30 - 45 % LITTLE 15 - 25 % FEW 5 - 10 % TRACE < 5 %
	GRO	UND WA	TER	PIT DIME	NSIONS (FT)
DATE 12/15/		TIME .	DEPTH FT.	x x x x	
				BOU 12 INCH TO 18 INCH DIAM: NO. OVER 18 INCH DIAM: NO.	
NOT EN	OUNTERE	X 0:	' HRS. AFTER		TEST PIT NO. TP 13

SIF	3 RI	INE	J				
ENVIR CONS	ONME	NTAL		ST PIT R	EPORT	[TEST PIT NO. TP 14
	NT:		E. D. & S., INC.	S RI/FS STEERING COMM BBER TIRE BACK		JOB NO: G-8026 LOCATION: SEE PLAN ELEVATION: 678 DATE START: 12/15/89 DATE FINISH: 12/15/89 LOGGED BY: R. L. BURDINE	
DEPTH (FT)	8AMPLE NOJ DEPTH RANGE	STRATA CHANGE (FT)		FIELD CLASSIFI	CATION		REMARKS
			SILT (ML) Loose, tan, dr organic debris	ry, mostly silt, little os from vegetation.	clay; rootlets and		Monitored with OVA during excavation.
-1 -			_	-			 Elevated OVA readings in breathing space of 1 to 6 ppm. Appears to be an old ditch or
- 2 -				o pinkish-red, dry, n oint structures with		lay, little	edge of lagoon. Width is approximately 6 ft. and depth is about 6.5 ft. Material in backhoe bucket had OVA readings of 100-150 ppm.
– 3 –							Sampled material from directly, below fill for volatile organics and semi-volatile organics.
- 4 -			 - ·	·			
-5 -			SILTY CLA Dense, red some silt, t	ldish-orange, slight			
-6 -					-RESIDUAL S	SOIL-	
				:			ASTM COMPONENT %
-7 -			вотто	OM OF EXPLORAT	ЛОN AT 7.4 FT.		MOSTLY 50 - 100 % SOME 30 - 45 % LITTLE 15 - 25 % FEW 5 - 10 % TRACE < 5 %
	GRO	UND WAT	TER		PIT	DIMENSIO	NS (FT)
DATE 12/15		TIME .	DEPTH FY.		x 3.5 (W)	x <u>7.4</u> (D)	= <u>725</u> CU. FT.
						BOULDEF NO. 0 NO. 0	= VOL. 0 CU. FT.
NOT ENC	OUNTERE	X d	HRS. AFTER				TEST PIT NO. TP 14

SIR	RINE		 	_
	NMENTAL	TES	T PIT REPORT	TEST PIT NOTP 15
	ACTOR:	E. D. & S., INC.	RIVES STEERING COMMITTEE BEER TIRE BACK-HOE	JOB NO: G-8026 LOCATION: SEE PLAN ELEVATION: 669 DATE START: 12/16/89 DATE FINISH: 12/16/89 LOGGED BY: R. L. BURDINE
DEPTH (FT) D	MPLE NOJ EPTH CHANGE (FT)		FIELD CLASSIFICATION	REMARKS
1 -		rootlets and on		Monitored with OVA during excavation No Organic Vapors were detected in breathing zone
			nd reddish-orange, slightly moist, mostly , trace quartz gravel. -FILL-	while excavating.
-2-				
-3 -				
- 4 -		SILTY CLAY Dense, reddis silt, trace mica	h-orange, slightly moist, mostly clay, little	
-5 -				
-6 -				
-7 -		ВОТТО	M OF EXPLORATION AT 6.5 FT.	ASTM COMPONENT % MOSTLY 50 - 100 % SOME 30 - 45 % LITTLE 15 - 25 % FEW 5 - 10 % TRACE < 5 %
	GROUND W	ATER	PIT DIMENS	IONS (FT)
DATE 12/16/89	TIME •	DEPTH FT.	x x	5 = 471 CU. FT.
NOT ENCOUR	NTEDEO 14	* HRS. AFTER		ERS D = VOL. 0 CU. FT. VOL. 0 CU. FT. TEST PIT NO. TP 15

	RR	NE	TEST PIT REPORT	TEST PIT NO. TP 16
	ULTAI	NTS		JOB NO: G-8026
	ECT:		MEDLEY FARMS RIFE	LOCATION: SEE PLAN
CLIE	NI: RACTO	\D.	MEDLEY FARM STEERING COMMITTEE E. D. & S., INC.	ELEVATION: 667
			CASE 580 E RUBBER TIRE BACK-HOE	DATE START: 12/16/89 DATE FINISH: 12/16/89
		JOLD.	ONDE GOOD ETTO DESTRUCTION OF THE PROPERTY OF	LOGGED BY: 12/16/89 R. L. BURDINE
DEPTH (FT)	BAMPLE NO./ DEPTH RANGE	STRATA CHANGE (FT)	FIELD CLASSIFICATION	REMARKS
			CLAYEY SILT (ML) Loose, tan to yellowish-orange, slightly moist, mostly silt, some clay, little fine sand; rootlets and organic debris, from vegetation.	Monitored with OVA during excavation
-1 -		-		No Organic Vapors were detected in breathing zone while excavating.
-2-	ł I		SILTY CLAY (CL) Dense, reddish-orange, slightly moist, mostly clay, some silt, trace quartz gravel and fine sand.	This pit cut across an existing ditch to investigate the possibility of this being from an old lagoon. The ditch was found to be only sufficial and had no
-3-			-FILL-	physical characteristics below ground surface.
- 4 -		_		
-5 -			CLAYEY SILT WITH SAND (ML) Loose, tan, slightly moist, mostly silt, some clay, little fine sand.	
į			-RESIDUAL SOIL-	
- 6 -			BOTTOM OF EXPLORATION AT 6.0 FT.	
				ASTM COMPONENT %
-7 -				MOSTLY 50 - 100 % SOME 30 - 45 % LITTLE 15 - 25 % FEW 5 - 10 % TRACE < 5 %
	GBC	UND WAT	ER PIT DIMENSI	ONS (FT)
DATE 12/16		TIME .	DEPTH FT. 30 x 2.5 x 6.0	= 450 CU.FT.
10		·	(L) (W) (D	<u>''</u>
			12 INCH TO 18 INCH DIAM: NO. 0 OVER 18 INCH DIAM: NO. 0	■ VOL. 0 CU. FT.
NOT EN	OUNTERE	D X	* HRS. AFTER COMPLETION	TEST PIT NO. TP 16

APPENDIX D
TEST BORING REPORTS



GUIDELINES FOR VISUAL-MANUAL IDENTIFICATION/CLASSIFICATION OF ROCK CORE

Rock core descriptions consist of the following factors, in the order presented: Field harness, weathering, color, grain size/texture, LITHOLOGY; fracture spacing characteristics and attitude; bedding and foliation; additional characteristics as required (rock continuity, etc.).

FIELD HARDNESS: A measure of resistance to scratching or abrasion.

- Very hard Cannot be scratches with knife or sharp pick. Breaking of hand specimens requires several hard blows of geologist's pick.
- Hard Can be scratched with knife or pick only with difficulty. Hard blow of hammer required to detach hand specimen.
- Moderately hard Can be scratched with knife or pick. Gouges or grooves to 1/4 in. deep can be excavated by hard blow of point of a geologist's pick. Hand specimens can be detached by moderate blow.
- Medium Can be grooved or gouged 1/16 in. deep by firm pressure on knife or pick point. Can be excavated in small chips to pieces about 1 in. maximum size by hard blows of the point of a geologist's pick.
- Soft Can be gouged or grooved readily with knife or pick point. Can be excavated in chips to pieces several inches in size by moderate blows of a pick point. Small thin pieces can be broken by finger pressure.
- Very soft Can be carved with knife. Can be excavated readily with point of pick. Pieces 1 in. or more in thickness can be broken with finger pressure. Can be scratched readily by fingernail.

WEATHERING: The action of the elements in altering the color, texture, and composition of the rock.

- Fresh Rock fresh, crystals bright, few joints may show slight staining. Rock rings under hammer if crystalline.
- Very slight Rock generally fresh, joints stained, some joints may show thin clay coatings, crystals in broken face show bright.

 Rock rings under hammer if crystalline.
- Slight Rock generally fresh, joints stained, and discoloration extends into rock up to 1 in. Joints may contain clay. In granitoid rock some occasional feldspar crystals are dull and discolored. Crystalline rocks ring under hammer.
- Moderate Significant portions of rock show discoloration and weathering effects. In granitoid rocks, most feldspars are dull and discolored; some show clayey. Rock has dull sound under hammer and shows significant loss of strength as compared with fresh rock.
- Moderately severe All rock except quartz discolored or stained. In granitoid rocks, all feldspars dull and discolored and majority show kaolinization. Rock shows severe loss of strength and can be excavated with geologist's pick. Rock goes "clunk" when struck.
- Severe All rock except quartz discolored or stained. <u>Rock "fabric" clear and evident</u>, but reduced in strength to strong soil. In granitoid rocks, all feldspars kaolinized to some extent. Some fragments of strong rock usually left. (Saprolite)
- Very severe All rock except quartz discolored stained. <u>Rock "fabric" clear and evident</u>, but mass effectively reduced to "soil" with only fragments of strong rock remaining. (Saprolite)
- Complete Rock reduced to "soil". Rock "fabric" not discernible or discernible only in small scattered locations. Quartz may be present as dikes or stringers (Residual Soil)

COLOR: The GSA Rock-Color Chart based on the Munsell System will be used where required to ensure uniformity.

GRAIN SIZE/TEXTURE: Terminology used to identify size, shape, and arrangement of constituent elements.

Aphanitic - Too small to be seen with the naked eye. Fine Grained - Barely distinguishable to the naked eye/ < 0.4 mm. Medium Grained - 0.4 mm to 2.0 mm (approx. 1/16 in.) Coarse Grained - 2.0 mm to 4.76 mm (approx. 1/4 in.) Very Coarse Grained - > 4.76 mm.

Note: Include other specialized terms as needed, ex., porphyritic, porphyroblastic, etc.



GUIDELINES FOR VISUAL-MANUAL IDENTIFICATION/CLASSIFICATION OF ROCK CORE

LITHOLOGY: Rock Type

Based on "Classification of Rocks" by Russell B. Travis, Quarterly of the Colorado School of Mines, Vol. 50, January 1955.

FRACTURE TYPES:

- Joint A simple fracture along which no shear displacement has occurred. May form joint sets.
- Shear A major fracture along which there has been appreciable displacement and accompanied by gouge and/or a severely fractured zone.
- Fault A major fracture along which there has been appreciable displacement and accompanied by gouge and/or a severely fractured adjacent zone.

Shear or Fault Zone - A band or zone of parallel, closely spaced shears or faults.

FRACTURE CHARACTERISTICS:

Roughness

- rough
- smooth
- slickensided

Aperature (distance between fracture walls)

Tight - < 0.25 mm Open - > 0.25 mm

Filling

Healed - Completely filled by secondary mineralization. Indicate minerals present.

Staining

Describe color and apparent mineralogy of surface staining.

Soil Filled - Indicate aperature and soil type present.

	SPACING AND ATTITUDE OF FRACTURES, BEDDING, AND FOLIATION							
<u>Fractures</u>	Bedding and Foliation	Spacing *	<u>Attitude</u>	Angle				
Very close Close Moderately Close Wide Very wide	Very thin Thin M edium Thick Very thick	Less than 2 in. 2 in 1 ft. 1 ft 3 ft. 3 ft 10 ft. More than 10 ft.	Horizontal Shallow or low angle Moderately dipping Steep or high angle Vertical	0° - 5° 5° - 35° 35° - 55° 55° - 85° 85° - 90°				

^{*} Note: Spacing refers to perpendicular distance between discontinuitities.

<u>ROCK CONTINUITY</u>: Any assessment of all inherent breaks, in rock wheather or not there has been relative displacement. (Other than drill breaks)

Extremely Fractured = Drill core stem less than 1 in.

Sound - Drill core stem greater than 8 in.

ROCK QUALITY DESIGNATION (RQD)

RQD in % = Length of Core in Pieces 4 in. and Longer x 100
Length of Run

Additional characteristics to note include: cavitities, voids, secondary mineralization, fossils, etc.

EXAMPLE:

Hard, sllightly weathered, gray, aphanitic ARGILLITE; closely spaced, smooth, tight, and planar, steeply dipping joints; minor open (1/4 inch) shear with clay gouge parallel to bedding at 40 ft., very thin, horizontal bedding; occasional calcareous solution pits (1/4 inch dia.).

- CAMBRIDGE ARGILLITE -

SIRRINE **ENVIRONMENTAL TEST BORING REPORT** BORING NO. SW1 CONSULTANTS PROJECT: MEDLEY FARM RI/FS MEDLEY FARM STEERING COMMITTEE CLIENT: G-8026 JOB NO: **ENVIRONMENTAL DRILLING & SERVICES** CONTRACTOR: 1 of 1 PAGE NO: MOBILE DRILL B-57 **EQUIPMENT USED:** LOCATION: See Plan **ELEVATION:** CORE 688.66 **GROUND WATER** DEPTH TO: (ft.) CASING SAMPLER DATE START: 6/12/89 BARREI BOTTOM HRS AFTE BOTTOM **DATE FINISH:** DATE WATER 6/13/89 TYPE **HSA** OF CASING DRILLER: D. G. Fitzpatrick WD 49.85 6.25 in 65.0 65.0 5/13/89 SIZE ID PREPARED BY: R. L. Burdine 22 50.0 59.4 65.0 6/14/89 HAMMER WT HAMMER FALL CASING BLOWS SAMPLER SAMPLE SAMPLE DEPTH **BLOWS** NUMBER DEPTH RANGE IN FEET FIELD CLASSIFICATION AND REMARKS PER 6 INCHES FOOT No split spoon samples were taken in this boring because it is 7.0 feet from BW1 location. The borehole was augered to a total depth of 65.0 feet using 6.25 inch HSA. Then a 2 Inch inside diameter well was installed, using 15 feet of stainless steel screen (.010 in. slot) and -5.0 the riser pipe was Sch. 40 PVC. The screened interval was from 59.4 to 44.2 ft. 10.0 _15.0

BLOWS/FT	. DENSITY	BLOWS/FT.	CONSISTENCY		SAMPLE ID.	COMP	ONENT %	GROUND WATER ABBREV.
0 - 4 5 - 10 11 - 30	VERY LOOSE LOOSE MEDIUM DENSE		VERY SOFT SOFT MEDIUM STIFF	S T U	SPLIT SPOON TUBE UNDISTURBED PISTON GRAB SAMPLE	SOME	50 - 100% 30 - 45% 15 - 25% 5 - 10%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
31 - 50 51+	DENSE VERY DENSE	9 - 15 16 - 30 31+	STIFF VERY STIFF HARD	NH X	OTHER NO RECOVERY	TRACE	<5%	BORING NO. SW1

20.0

SIRRINE **ENVIRONMENTAL TEST BORING REPORT** BORING NO. SW3 CONSULTANTS PROJECT: MEDLEY FARM RI/FS CLIENT: MEDLEY FARM STEERING COMMITTEE JOB NO: G-8026 ENVIRONMENTAL DRILLING & SERVICES CONTRACTOR: PAGE NO: 1 of 4 MOBILE DRILL B-57 EQUIPMENT USED: LOCATION: See Plan **ELEVATION:** 669.90 CORE GROUND WATER CASING SAMPLER DEPTH TO: (ft.) DATE START: BARREI 6/19/89 BOTTOM OF CASING DATE HRS AFTER **DATE FINISH:** WATER TYPE **HSA** S 6/26/89 COMP OF HOLE DRILLER: D. G. Fitzpatrick 5/23/89 6 1/4 In. 1 3/8 ln. WD 67.3 72.0 72.7 SIZE ID PREPARED BY: R. L. Burdine 3/26/89 140 lbs. 48 66.64 77.0 79.0 HAMMER WT 30 ln. HAMMER FALL CASING SAMPLER SAMPLE NUMBER DEPTH SAMPLE BLOWS BLOWS DEPTH FIELD CLASSIFICATION AND REMARKS PER FEET PER RANGE FOOT 6 INCHES 5.0 3 5.0 SILT (ML) Soft, reddish orange, dry, mostly silt, trace clay, quartz pebbles, S1 6 and mica. 7.0 6 -RESIDUAL SOIL-- 10.0 10.0 8 S2 9 SILT WITH SAND (ML) 12.0 Medium dense, red to tan to silver-gray, dry, mostly silt, few fine to medium sand, little mica. -SAPROLITE-15.0 SILT WITH SAND (ML) 15.0 Soft, reddish-pink, tan, and orange, mostly silt, little fine sand, 5 **S**3 trace clay, trace mica. 5 17.0 8 -SAPROLITE-20.0 COMPONENT % GROUND WATER ABBREV. BLOWS/FT. DENSITY BLOWS/FT. CONSISTENCY SAMPLE ID. SPLIT SPOON MOSTLY 50 - 100% VERY SOFT 0 - 2 0 - 4 VERY LOOSE WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ TUBE SOME 30 - 45% 5 - 10 3 - 4 SOFT LOOSE LITTLE 15 - 25% FEW 5 - 10% MEDIUM STIFF UNDISTURBED PISTON 11 - 30 MEDIUM DENSE 5 - 8 GRAB SAMPLE OTHER 31 - 50 DENSE VERY DENSE 9 - 15 STIFF TRACE 51+ 16 - 30 **VERY STIFF** <5% BORING NO. SW3 NR NO RECOVERY

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HARD

SIRRINE

ENVIRONMENTAL CONSULTANTS TEST BORING REPORT PAGE 2 OF

BORING NO. SW3

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE		FIELD CLASSIF	FICATION AND	REMARKS
2 0.0		3 3 6	S4	20.0		<u>/ITH SAND(ML)</u> ay, dry, mostly silt, fe		ce clay, trace
		6		22.0			-3	SAPROLITE-
 25.0		4 6		25.0		ITH SAND(ML) ay, dry, mostly silt, fe	ew fine sand, trac	ce clay, trace mica.
		5 5	S5	- 27.0			-9	SAPROLITE-
30.0		6 _4 _5	S6	30.0	Medium	ITH SAND(ML) I stiff, gray to tan, dry ace clay.	•	fine sand, few
				32.0			-3	SAPROLITE-
— 3 5.0		7		35.0	SUTV	VITH SAND(ML)		
		11 14 22	S7	- 37.0	Mediur	n stiff, gray to tan, dr race clay.	ry mostly silt, little	e fine sand, few
				,			-\$	SAPROLITE-
40.0		9 16 20	S8	40.0 - 42.0	Mediun	"ITH SAND(ML) n stiff, gray to tan, dry pebbles and mica.	y mostly silt, little	e fine sand, trace
		26		72.0			-\$	SAPROLITE-
-45.0 BLOWS	CT DE	NSITY B	OWE		PICTENOV T	CAMPIED	COMPONENT */	GROUND WATER ABBREV
0 - 4 5 - 10 11 - 30 31 - 50	VERY LO	$\overline{}$	0 - 2 3 - 4 5 - 8 9 - 15	VE SC MI	DET DIUMSTIFF	SAMPLE ID. S SPLIT SPOON T TUBE U UNDISTURBED PISTON G GRAB SAMPLE	MOSTLY 50 - 100% SOME 30 - 45%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
51+	VERY D	ENSE	16 - 30 31+	VE	RYSTIFF	X OTHER NR NO RECOVERY	TRACE <5%	BORING NO. SW3

SIRRINE

CONSULTANTS

TEST BORING REPORT PAGE 3 OF

BORING NO. SW3

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE		FIELD CLASSIF	FICATION AND I	REMARKS
—45. 0		9 9 9 16	S9	45.0 47.0	Medi	WITH SAND (ML um stiff, gray to tan, o trace clay.		tle fine sand, few
— 50.0		9 14 16 18	S10	50.0 - 52.0				orange, dry, mostly silt,
	-						-SA	APROLITE-
—55.0		6 10 25 27	S11	55.0 57.0			oliated.	orange, dry, mostly silt, litt
—60.0		12 22		60.0	<u>SILT</u> Loose		tan to yellowish d	orange, dry, mostly silt,
		22 50	S12	62.0		nica, trace clay, wea	kly foliated.	APROLITE-
65.0		30		65.0			dy foliated.	range, dry, mostly silt.
}		50/5 in.	S13	 66.0		Auger	Refusal at 65.0	··-·
70.0					in	: o water has been e ch tri-cone roller b	ncountered. Duit will be used to	ue to this fact a 5 7/8 o drill out the end of the used as drilling fluid.
0 - 4 5 - 10 11 - 30 31 - 50	VERY LOOSE MEDIUM DENSE	DOSE	0 · 2 3 · 4 5 · 8 9 · 15	VE SC ME	EDIUM STIFF	SAMPLE ID. S SPLIT SPOON TUBE J UNDISTURBED PISTON GRAB SAMPLE OTHER	MOSTLY 50 - 100% SOME 30 - 45%	GROUND WATER ABBREV WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ

SIRRINE ____

ENVIRONMENTAL CONSULTANTS TEST BORING REPORT PAGE 4 OF

BORING NO. SW3

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE		FIELD CLASSIF	FICATION AND I	REMARKS
- 70.0					No	te:		
}			-			At 70.5 ft. drilling be	comes difficult	Anneare that it is
			1 1		,	weathered rock. Fro	m drill cuttings	it appears to be a
		_	-			GNEISS.		
ŀ			1	,				
ļ]					
75.0			-					
75.0			1					
ł			-					
			1 1	1				
[-{					
f]					
ļ								
	1		1	.		Bottom of Exp	oloration at 79.0	ft.
80.0]					
-			-{					
ļ			j	j	No	to-		
ſ						te: A 2 inch well was ins	stalled in the be	rahola Stainlass
			1		:	steel screened was p	placed from 61.	
]		ĺ	PVC riser to the surf	ace.	
1								
85.0			<u> </u>					•
}								
}			†					
]					
-			1					
			1					
			-					
90.0			j					
Ļ]					
			}					
t]					
-			-					
}			 					
]					
95.0		 						
LOWS/	FT. DEN	ISITY	BLOWS/FT	. CONSI	STENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBR
- 4 - 10	VERY LO	XXSE	0 - 2 3 - 4	SOF		S SPLIT SPOON T TUBE U UNDISTURBED PISTON	MOSTLY 50 - 100% SOME 30 - 45% LITTLE 15 - 25%	WD - WHILE DRILLING NE - NOT ENCOUNTERED
- 10 1 - 30 1 - 50	MEDIUM DENSE	DENSE	5 · 8 9 · 15	STIF	NUM STIFF	G GRAB SAMPLE	FEW 5 - 10%	UR - NOT READ

SIRRINE **TEST BORING REPORT ENVIRONMENTAL** BORING NO. SW4 **CONSULTANTS** MEDLEY FARM RIFS PROJECT: CLIENT: MEDLEY FARM STEERING COMMITTEE JOB NO: G-8026 **ENVIRONMENTAL DRILLING & SERVICES** CONTRACTOR: PAGE NO: 1 of 4 **MOBILE DRILL B-57** EQUIPMENT USED: LOCATION: See Plan **ELEVATION:** 668.68 CORE CASING **GROUND WATER** DEPTH TO: (ft.) SAMPLER DATE START: 7/6/89 BARREI URS AFTER BOTTOM | BOTTOM OF CASING OF HOLE DATE FINISH: DATE WATER TYPE **HSA** S 7/12/89 DRILLER: D. G. Fitzpatrick 61/4 in. 1 3/8 ln. 7/7/89 WD 62.0 65.0 65.0 SIZE ID PREPARED BY: R. L. Burdine 140 lbs. HAMMER WT 30 in. HAMMER FALL CASING BLOWS SAMPLE NUMBER DEPTH SAMPLER SAMPLE BLOWS DEPTH FIELD CLASSIFICATION AND REMARKS IN FEET PER FOOT PER 6 INCHES RANGE -5.0 5.0 6 SILTY CLAY (CL) Medium stiff, reddish-orange, dry, mostly clay, some silt, trace S1 16 mica. 7.0 11 -RESIDUAL SOIL-- 10.0 10.0 3 S2 Soft, tan to orangish, dry, mostly silt, few clay, trace mica. 12.0 -SAPROLITE (Metasediment)--15.0 15.0 SILT (ML) Medium stiff, tan, moist, mostly silt, few clay. 7 **S3** 17.0 9 -SAPROLITE (Metasediment)-20.0

31 - 50	MEDIUM DENSE DENSE VERY DENSE	9 - 15 16 - 30 31+	STIFF VERY STIFF HARD	G GRAB SAMPLE X OTHER NR NO RECOVERY	FEW 5 - 10% TRACE <5%	BORING NO. SW4
5 - 10	VERY LOOSE LOOSE	0 - 2 3 - 4 5 - 8	VERY SOFT SOFT MEDIUM STIFF	S SPLIT SPOON T TUBE U UNDISTURBED PISTON	MOSTLY 50 - 100% SOME 30 - 45% LITTLE 15 - 25%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.

SIRRINE

ENVIRONMENTAL CONSULTANTS TEST BORING REPORT PAGE 2 OF

CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
	2 3	S4	20.0	SILT (ML) Medium stiff, tan, moist, mostly silt, few clay.
	4		22.0	-SAPROLITE (Metasediment)-
	4 5 7	S 5	25.0 27.0	SILT (ML) Medium stiff, tan, dry, mostly silt, some very fine sand, trace mica; Sample has black stained relict joints and fractures.
			27.0	-SAPROLITE (Metasediment)-
	3 5 6 8	S 6	30.0 32.0	SILT (ML) Medium stiff, tan, dry, mostly silt, some very fine sand, trace mica; Sample has black stained relict joints and fractures. -SAPROLITE (Metasediment)-
····				
	9 7 12 24	S7	35.0 37.0	SILT (ML) Medium dense, gray, dry, mostly silt, little very fine sand, few mica. -SAPROLITE (Metasediment)-
			40.0	
	6 11 14	\$8	40.0 42.0	SILT (ML) Medium dense, gray, dry, mostly silt, little very fine sand, few mica.
				-SAPROLITE (Metasediment)-
T	ICITY To	1.0/4/2:5		OOTENOV L. CAMPLE IS. LOOMBOUGHT OF SOCIETY
VERY LO LOOSE MEDIUM DENSE	DOSE I DENSE	0 - 2 3 - 4 5 - 8 9 - 15 16 - 30	VE SC ME ST VE	SISTENCY SAMPLE ID. COMPONENT % GROUND WATER ABBRE ERY SOFT OFT T TUBE EDIUM STIFF OFF OFF OFF OFF OFF OFF OFF OFF OFF
	T. DEN VERY LC LOOSE MEDIUM DENSE	9 7 12 24 SERVICES LOOSE LOOSE MEDIUM DENSE	PER FOOT 6 INCHES 2 2 3 4 3 4 5 7 7 7 5 6 8 9 7 12 24 5 5 6 8 11 14 5 5 8 11 14 5 8 9 15 6 9 9 7 12 24 5 6 9 9 7 12 24 5 6 9 15 6 9 15 6 8 9 15	PER FOOT 8 INCHES 2 20.0 2 3 20.0 2 3 22.0 4 22.0 4 22.0 5 7 7 27.0 3 30.0 5 6 8 32.0 9 7 35.0 7 12 S7 12 37.0 5 6 8 32.0 The state of the state o

ENVIRONMENTAL CONSULTANTS TEST BORING REPORT PAGE 3 OF

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE		FIELD CLASSIF	FICATION AND	REMARKS
— 45.0		6 13 18 32	S9	45.0 47.0		T (ML) dium dense, gray, dry, a.	•	very fine sand, few
— 50.0		718		50.0		NDY SILT (ML)	h	
		40 50/4 in.	S10	51.8	yello ang	owish feldspar at 51.5	ft. Approx5 in	d, trace mica; streak of ch in width at about 40
						Note:		
— 55.0						Drilling became	difficult at 52.5	π.
55.5		10 17 50/5 in.	S11	55.0 - 56.4		T (ML) se, gray, slightly mois	st, mostly silt, little	e fine sand, few mica.
		·					-SAPROLI	ITE (Metasediment)-
60.0								
 60.0		15 50/5 in.	S12	6 <u>0</u> .0 60.9	Den	「 (ML) se, gray, slightly mois e phlogopite (brown m		e fine sand, few mica,
							-SAPROLI	ITE (Metasediment)-
— 65.0		17		65.0	-	r (ML)	et moetly silt little	o fine cond fow mice
		30 30 50	S13	- 67.0		se, gray, slightly mois e phlogopite (brown m	nica).	e fine sand, few mica,
							-SAPROLI	ITE (Metasediment)-
70.0 BLOWS	/FT. DE	VSITY IB	LOWS/F1	CON	SISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV
0 - 4 5 - 10 11 - 30 31 - 50	VERY LOOSE		0 - 2 3 - 4 5 - 8 9 - 15	VE SC ME ST	ERY SOFT OFT EDIUM STIFF	S SPUT SPOON T TUBE U UNDISTURBED PISTON G GRAB SAMPLE	MOSTLY 50 - 100% SOME 30 - 45% LITTLE 15 - 25% FEW 5 - 10%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
51+	VERY D	ENSE	16 - 30 31+		RY STIFF	X OTHER NR NO RECOVERY	TRACE <5%	BORING NO. SW4

ENVIRONMENTAL CONSULTANTS TEST BORING REPORT PAGE 4 OF 4

BORING NO. SW4

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE		FIELD CLASSIF	ICATION AND I	REMARKS
- 70.0						Bottom of Exp	loration at 70.5	ft
			1			Bottom of Exp	noration at 70.5	11.
			1	;	,	Note:		
			1	·				oorehole. Stainless o 68 feet with a PVC
]			riser to the surface).	D 00 leet with a P V C
75.0	· · · · · · · · · · · · · · · · · · ·		1					
			-					
			1					
	· · · · · · · · · · · · · · · · · · ·		1					
80.0								
00.0			}					
Ì			1					
Ì								
ŀ			1					
-]					
85.0								
			}					
			-					
Ī			1					
ŀ]					
90.0]					
}			-					
}			1		•			
-95.0 LOWS/	FT. DE	NSITY I	BLOWS/FT	CONS	SISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBR
- 4 - 10	VERY LOOSE	OOSE	0 · 2 3 · 4 5 · 8	VE SC	ERY SOFT	S SPLIT SPOON T TUBE U UNDISTURBED PISTON	MOSTLY 50 - 100% SOME 30 - 45% LITTLE 15 - 25%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
1 - 30 1 - 50 1+	DENSE VERY D		9 - 15 16 - 30 31+	ST	TFF RY STIFF	G GRAB SAMPLE X OTHER NR NO RECOVERY	FEW 5 - 10% TRACE <5%	BORING NO. SW4

BORING NO. SW101 (HP101)

				0.011465								
		EDLEY	FARM RVF	S PHASE	: H				JOB NO	D :	G	-8026
CLIENT	· —				OMMITTEE G & ENGINE	EDING			PAGE	NO:		1 of 2
	ACTOR		CME-550		G & ENGINE	ENING			LOCAT	ION:	Se	e Plan
	MENT US)EU: _			 I			COST	ELEVA			01.15
GROUNE	WATER		DEPTH TO			CASING	SAMPLER	CORE BARREL	DATES			/23/90
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S	トノ	DATE			/27/90
B/24/90		30.05	Or CASING	34.3	SIZE ID	6 1/4 in.	1 3/8 In.	X	DRILLE			Warren
B/27/90		28.5		34.3	HAMMER WT		140 lbs.			RED BY:		Enright
B/2B/90		28.1	•	34.3	HAMMER FALL		30 In.		rnera	MED BT:		Enright
DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLEI BLOWS PER 6 INCHES	NUMBER	SAMPLE DEPTH RANGE		FIELD	CLASSII	FICATIO	N AND	REMARK	S	
5.0		4 6 7	S1	4.0	SILT (Stiff, c	lark yellowi	sh-orange	∍, dry, m		., few clay, RESIDUA		IL-
10.0		6 7 8	\$2 11	9.0	<u>SILT</u> Very s dry, m	(<u>ML)</u> stiff, grayish nostly silt, fe	i-orange t	o moder: nicaceous	s, relict	owish-brow foliation. SAPROLI		
15.0		50	\$3	14.0 14.5		(ML) grayish-ora v silt, few cl					dry,	
20.0		50/5 lr		19.0 19.5	dry, m quartz	itiff, grayish lostly silt, fe gravel.	w clay, m	nicaceous	s, relict	foliation, fe	€W	
BLOWS	VFT. DE	NSITY	BLOWS/F		SISTENCY	SAMPL		COMPO		GHOUND	WATE	RABBRE
0 - 4 5 - 10 11 - 30 31 - 50	DENSE	M DENSE	0 - 2 3 - 4 5 - 8 9 - 15 16 - 30	90 ME 811	FT DIUM STIFF IFF	S SPLIT SPO T TUBE U UNDISTUR G GRAB SAN X OTHER	BED PISTON	UTTLE FEW	50 - 100% 30 - 45% 15 - 25% 5 - 10% «5%	WD - WHIL NE - NOT UR - NOT	ENCOU READ	NTERED
51+	VERY E	/ERSE	31+			NR NO RECOV	ERY			BORING	NU.	2W 1U1

SIRRINE

ENVIRONMENTAL TEST BORING REPORT

BORING NO. SW101

CASING SAMPLER SAMPLE BLOWS MUMBER BAMPLE DEPTH RANGE BLOWS IN FEET FIELD CLASSIFICATION AND REMARKS PER FOOT PER 6 INCHES SILT (ML) 50/3 in. **S5** 24.0 Hard, grayish-orange to moderate yellowish-brown, dry, 24.2 25.0 mostly silt, few clay, trace fine sand, micaceous. -SAPROLITE-**WELL-GRADED GRAVEL (GW)** 50/1 ln. 29.0 **S6** Very dense, grayish-orange to moderate yellowish-brown, 30.0 29.1 moist, mostly gravel (schist and quartz), trace slit and fine sand, micaceous. -SAPROLITE (SCHIST)-Note: Drilling tough after 29.0 feet; no recovery and no sample at 34.0 feet. 50/0.0 AUGER REFUSAL AT 34.3 FEET. -35.0 Note: Due to density of material, driving a hydropunch is not possible. Instead a 2.0 inch permanent monitoring well (SW101) was installed in the borehole. The stainless steel screened interval was from 23.85 feet to 33.85 feet with PVC riser pipe to the surface. 40.0 45.0 COMPONENT % GROUND WATER ABBREV. BLOWS/FT. DENSITY BLOWS/FT. CONSISTENCY SAMPLE ID. SPLIT SPOON MOSTLY 80 - 100% WD - WHILE DRILLING **VERY SOFT** VERY LOOSE 0 - 2 0 - 4 NE - NOT ENCOUNTERED UR - NOT READ TUBE UNDISTURBED PISTON GRAB SAMPLE SOME LITTLE 5 - 10 11 - 30 31 - 50 LOOSE MEDIUM DENSE 3 - 4 5 - 8 SOFT 15 - 25% Ü MEDIUM STIFF STIFF DENSE VERY DENSE 9 - 15 16 - 30 FEW 5-X OTHER MR NO RECOVERY VERY STIFF BORING NO. SW101 HARD

											_	
PROJE			FARM RVF						JOB N) :	G	-8026
CLIENT					OMMITTEE	FONG			PAGE	NO:		of 3
	ACTOR				G & ENGINE OUNTED DR				LOCAT	TON:		ee Plan
	MENT U	SED: _			I			CORE	ELEVA			617.43
GROUNI	DWATER		DEPTH TO	: (IL)		CASING	SAMPLER	BARREL	•	START:		/22/90
DATE	HRS AFTER	WATER	DOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	8	∇Z	1	FINISH:		V23/90
3/23/90		NE	49.14	49.14	SEZE NO	6 1/4 In.	1 3/8 ln.		DRILLI			Bergman
B/23/90		37.44	48.58	50.00	HAMMER WT		140 lbs.			RED BY:	_	Harrigan
					HAMMER FAL		30 ln.		PREFA	MED BY:		- Idirigan
DEPTH IN PEET	BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHE	NUMBER	SAMPLE DEPTH RANGE				САТЮ	N AND	REMARK	(S	
1			┥	ļ		Y CLAY (CL						
			-		Mooe	rate reddish	i-orown, ti	race mic	a, dry.			
i :			_		i							
Į į			4		1							
		 			ł							
					ĺ							
		5		4.0		EY SILT (N						
_5.0		8	☐ S1	۱ _		stiff, modera						
F-5.0		8	ן יי] _	yelkov	vish-orange	, ary, mos	uy sin, s	ome cia	iy, iittie mi	ca.	
İ		 :	11	6.0						-RE	SIDU	AL SOIL-
l i			-		ļ							
} '			┪	}								
			_		ļ							
					SILT	/MEN						
		6	_	9.0		dark yellowi	sh-orange	. mottled	d mediu	m		
10.0		5 4	S2	-	reddis	sh-brown, d	ry, mostly				ıyer	
		<u> </u>	-	11.0	with n	nanganese.				nc	CIDII	AL COIL
		 	'	11.0						-45	SIDO	AL SOIL-
			\supset	į į								•
		ļ <u> </u>	_									
l i		<u> </u>		1								
		3		14.0	 -	****						
4.50		5	٦	'	SILT	<u>(ML)</u> grayish-orar	vae day a	nostiv sil	t little -	nka rolia	•	
15.0		6	S3	-	foliation		-Sa, aty, f	involly sil	n, mu re (inca, renci		
		7	7	16.0]					-RE	SIDU	AL SOIL-
			_									
Į		ļ										
				1	ł							
			\dashv		 -							
		 	1_		SILT	/ML\						
		4		19.0		ım dense, s	tiff, dark t	o pale ve	ellowish	-orange. d	iry.	
20.0		6	⊒ \$4	_	mosti	y silt, few m	ica; 4" qu	artz laye	r at 21	ieet.	•	
		L	<u> </u>	1					•			SCHIST)
BLOWS		NSITY	BLOWS/F		SISTENCY	SAMPL						ER ABBREV.
0 · 4 5 · 10 11 · 30 31 · 60	LOOSI	M DENSE	0 · 2 3 · 4 5 · 8 9 · 15	SC ME	RY SOFT IFT EDIUM STIFF IFF	S SPLIT SPO T TUBE U UNDISTUR G GRAB SAM	BED PISTON		90 - 100% 10 - 48% 16 - 29% 5 - 10%	WD - WHI ME - NOT UR - NOT	ENCO	
31 - 90 51+		DENSE	16 - 20 31+	VE	RY STIFF	X OTHER			4%	BORING	NO.	SW102



	CASING	SAMPLER	BANPLE	2115715	-			PAGE 2 OF 3		
DEPTH IN FEET	BLOWS PER POOT	BLOWS PER S INCHES	NUMBER	BAMPLE DEPTH RANGE		FIELD CLASSIF	CATION AND	REMARKS		
		6 11	S4	21.0	SILT (N	IL) n dense, stiff, dark to	nale vellowish-	range dny		
			<u> </u>			silt, few mica; 4" qua	rtz layer at 21 fe	et.		
					ļ	•	-SAPROLITE (C	DUARTZ - MICA SCHIST		
			}							
		9		24.0	SILT (N			de la		
25.0		14 14	S 5	-		n dense, very pale or y fine sand (quartz), '				
		13	 	26.0	drilling.	•				
			1		 		-SAPROLITE (C	QUARTZ-MICA SCHIST)-		
			•		Note: S	Softer drilling at 28 fe	et.			
		10		29.0						
_30.0		25	S6	-	SILT (N	<u>(L)</u> Inse, light gray to yel	iowich-grav elig	htly malet		
		35 50/5 in.	1	31.0		silt, some mica, foliat	ion.			
			•				-SAPROLITE (C	QUARTZ-MICA SCHIST)-		
			1							
	· · · ·									
		10 22	S7	34.0	SILT (A					
—35.0	-	24] "	36.0		inse, grayish-orange nostly slit, some mica				
		36	<u> </u>	30.0	relict ba	ınding.		.,		
			ł				-SAPHULITE (C	QUARTZ-MICA SCHIST)-		
			İ							
		50/5 in.	S8	39.0 39.5	SILT (N	(L)				
40.0				38.3	Very de	nse, pale yellowish-		moist, mostly silt,		
					some m	nica, few fine grain sa		QUARTZ-MICA SCHIST)-		
1 1			}				_ _ _	_ _ _		
		50/3 in.	39	44.0		<u>' SILT (ML)</u> Inse, olive gray, w et,	mostly silt. little	very coarse to		
45.0		JU/O 111.	\ <u> </u>	44.2		in sand (quartz), little	mica.	•		
BLOWS	FT. DEN	ISITY	LOWS/F	. CON	SISTENCY		-TRANSITION 2	ZONE- GROUND WATER ABBREV		
0-4	VERY L	OOSE	0 - 2		ERY SOFT	S SPLIT SPOON T TUBE	MOSTLY 50 - 100%	WD - WHILE DRILLING		
5 - 10 11 - 30 31 - 50	LOOSE MEDIUM DENSE	DENSE	3 - 4 5 - 8 9 - 15	M	EDIUM STIFF	UNDISTURBED PISTON G GRAB SAMPLE	SOME 30 - 46% LITTLE 16 - 25% FEW 6 - 10%	NE - NOT ENCOUNTERED UR - NOT READ		
51+	VERY D	ENSE	16 - 30 31+	VE	ERY STIFF	STIFF X OTHER TRACE AND ROBING NO. SW102				



DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER SLOWS PER 6 INCHES	SAMPLE NUMBER	BAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			1		
			4		
			┨	Ì	
			1		
			1		
		50/3 ln	<u>.</u> S10	48.0 48.2	SILT (ML)
- 1	-			40.2	Very dense, olive gray, saturated, mostly silt, some mica, little quartz; rock that is weathered, foliated (schist).
			1		
50.0			1		-TRANSITION ZONE (QUARTZ-MICA SCHIST)-
					BOTTOM OF EXPLORATION AT 48.6 FEET.
			-		
			1		
]	1	Note: Monitoring well SW-102 constructed in boring HP102
			4	1	using 15 feet of 2-inch ID stainless steel screen and 38 feet
- 1			-	1	of 2-inch ID PVC riser pipe. Screened interval is from 48.6 feet to 33.58 feet.
			-	1	1991 (0 33.36 1991.
-55.0			1	1	
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-			4	1	
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]		
		ļ	4		
			-		
-70.0		 	┨		
BLÖWS	/FT. DEI	NSITY	BLOWS/F	T. CON	SISTENCY SAMPLE ID. COMPONENT % GROUND WATER ABBR
-LU113					VERY SOFT 8 SPLIT SPOON MOSTLY SQ - 100% WD - WHILE DRILLING
0 - 4	VERY L	COSE	0 - 2		
	LOOSE		0 - 2 3 - 4 6 - 8 9 - 15	S. M	MEDIUM STIFF G GRAB SAMPLE SOLUTION WU - WILL DISCURDED WE - NOT ENCOUNTERED UR - NOT READ UR - NOT READ - 10%

			ARM RVF						Ī			
CLIENT	• •				OMMITTEE G & ENGINEI	DING			JOB N			8026
	RACTOR		CME-550		a e eminti	-ning			PAGE			of 3
	MENT U							CORE	LOCAT			e Plan 3.40
GROUN	WATER		DEPTH TO	: (IL)		CASING	SAMPLER	BARREL		BTART:		15/90
DATE	HRS AFTER		BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	8	トフ		FINISH:	8/	16/90
B/17/90		36.7		50.0	SEZE ID	6 1/4 ln.	1 3/8 in.		DRILLI			arren
F			70,0	•	HAMMER WT	ベブ	140 lbs.	$\langle \cdot \rangle$	rnera 	RED BY:	R. E	nright
					HAMMER FALL	マ	30 ln.	X	1			
DEPTH	CASING	SAMPLER		SAMPLE								
IN FEET	BLOWS PER	BLOWS PER	NUMBER	DEPTH RANGE		FIELD	CLASSII	FICATIO	N AND	REMAR	KS	
	FOOT	6 INCHES			L							
		}	-{	1								
		 	┥									
	'	}	7									
			_									
				1	İ							
i i		<u> </u>	⊣	1								
				4.0	CI AVI	EY SILT (M	IL)					
		9	- s ₁	4.0		oderate re		wn, dry.	mostly	silt, little	clay.	
—5.0		10	┤ ~``	5.5	mottle			•	•		•	
		1	+	3.5					-	SAPROL	JTE-	
ļ .			┨ .	1 1								
			┥									
			7								_	
1 1]							•		
												
		8	4	9.0	SILT (ML)						
_10.0		8 7	S2	-		tiff, yellowk	sh-gray, d	lry, most	ly silt, fe	ew clay.		
			ol	11.0						CADDO	ITE	
i i		 '	┪	1 1.5					-	SAPROL	4 I E.	
			7									
			7									
]									
[]]									
!												
		9	_	14.0	SILT (
15.0		11	S3	_		tiff, yellowk	sh-gray, d	iry, most	ly silt , f	ew clay.		
		10	4	1								
		1:		16.0								
l l			┪	1								
1			1									
			7									
			-									
<u> </u>												
1		2		19.0	SILT (
20.0		10	S4	-	Very s	tiff, yellowk	sh-gray, d	lry, most	ly silt, fo	ew clay.		
			<u> </u>							<u> </u>		
BLOWS	FT. DE	NSITY	BLOWS/F		SISTENCY	SAMPL				GROUNI	TAWC	ER ABBREV
0 - 4 5 - 10	VERY I	LOOSE	0 - 2 3 - 4			B SPLIT SPO T TUBE	D#4		10 - 100% 10 - 46%	WD - WH		LLING UNTERED
11 - 30	MEDIU	M DENSE	5 - 8	ME	DIUM STAFF		BED PISTON IPLE		15 - 25% 5 - 10%	UR - NO		
31 - 50 51+	DENSE VERY		9 - 15 16 - 30	VE	RY STIFF	OTHER	_		.	BORING	3 NO.	SW103
.			31+	HA	מא ו	NEVUY		l .		•		



BORING NO. SW103

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHEB	SAMPLE NUMBER	RAMPLE DEPTH RANGE		FIELD CLASSIF	TCATION AND	REMARKS
		11	84	21.0	SILT / Very s	(ML) stiff, yellowish-gray, dr	y, mostly silt, fev	w clay.
·			1		<u>.</u>			
			1					
			<u> </u>			/n.m.		
 25.0		9 10	\$5	24.0	SILT Very s	stiff, yellowish-gray to	dusky, slightly m	noist, mostly silt,
	_	14 13		26.0	18W CI	ay, relict foliation.	-SAPROLITE-	
			1					
			-					
		7	-	29.0				
—30.0		10	S6	-		stiff, yellowish-gray to	dusky, molst, m	ostly silt, few
		15	3	31.0	clay, r	relict foliation.	-SAPROLITE-	
]					
			1					
•	_	11	-	34.0	SILT	/ML\		
—35.0		15 21 2	S 7	- 36.0	Hard,	yellowish-gray to dusi foliation.	•	silt, few clay,
			4	30.0	Note:	Ground water encour	-SAPROLITE- ntered at 36.6 fe	et.
			1		<u> </u>	`		
			1					
40.0		8 30	S8	39.0	SILT			the formation
— 40.0		50	}	40.5		yellowish-gray to dust fine sand, relict foliation		вік, і еж сіау,
			}				-SAPROLITE-	
			-					
:			1		Note:	Hydropunch refusal is	n dense saprolit	e at 44.8 feet.
—45 .0			1				•	
BLOWS	/FT. DEI	NSITY	I_ BLOWS/F	CON	SISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBRE
0 - 4 5 - 10 11 - 30			0 · 2 3 · 4 5 · 8	80 M	ERY SOFT OFT EDIUM STIFF	S SPLIT SPOON T TUBE U UNDISTURBED PISTON G GRAB SAMPLE	MOSTLY 80 - 100% SOME 80 - 46% LITTLE 16 - 25%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
31 - 50 61+	DENSE VERY D	ENSE	9 - 15 16 - 30 31+	YE	nff E ry Stiff Ard	X OTHER NR NO RECOVERY	FEW 5-19% TRACE 49%	BORING NO. SW103



SIRRINE BORING REPORT BORING NO. PAGE 3 OF

FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	NUMBER	BAMPLE DEPTH RANGE		FIELD CLASSIF	FICATION AND	REMARKS
		50/4 ln.	S9	44.5	SILT (
l				44.8		grayish-orange, wet, r	mostly silt, few c	lay, trace sand
1	Į.		1	1	(seam	s), relict foliation.	CARROLIT	=
	L		}	1 1			-SAPROLITI	E -
1	1		1					
			1	1				
i			1					
ĺ			1	1				
		<u> </u>	ł	1 1				
 5 0.0			ļ	 				
1		 -	ł	! !		BOTTOM OF EXPL	ORATION AT 5	0.0 FEET.
			1					
			ł					
1			i					
l			1					
į			1	[
l			1		Note:	Due to density of mat	terial the driving	of a Hydropunch
ĺ			1] l		possible. Instead a 2.		
			1		well w	as installed in the bon	ehole. The stair	niess steel
—55.0			1	{		ed interval is from 29		
l	1		1	1 1		ipe to the surface.		
l			1]		•		
i			1]				
l			1					
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l			1					
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60.0			1					
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			} .					
—70.0			<u> </u>			· · · · · · · · · · · · · · · · · · ·		·
BLOWS	VFT. DEI	ISITY E	LOWS/F	T. CONS	SISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV
0.4	VERY L	DOSE	0 - 2		RY SOFT	S SPLIT SPOON	MOSTLY 80 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE		3 - 4 5 - 8		XFT Edium stwa	T TUBE U UNDISTURBED PISTON	SOME 20 - 46% LITTLE 16 - 25%	NE - NOT ENCOUNTERED UR - NOT READ
	MEDILIL	DENSE				G GRAB SAMPLE		1 - 11 - 110 110 110 110 110 110 110 110
11 - 30 31 - 50	DENSE	1	9 - 15 16 - 30		IFF RY STIFF	X OTHER	FEW 8-10% TRACE 45%	

SIRRINE ENVIRONMENTAL TEST BORING REPORT BORING NO.5W104 (HP104)

_												
PROJE		EDLEY										
CLIEN	••—				MMITTEE	F5046			JOB M		_G-	8026
	RACTOR				g & Engine	ERING			PAGE			of 3
	MENT U	SED: _	CME-550			·			LOCAT			e Plan
GROUNI	D WATER		DEPTH TO	: (fL)		CASING	SAMPLER	CORE	DATE	TART:		7.46 16/90
DATE	HRS AFTER	WATER	BOTTOM	BOTTOM	TYPE	HSA	S			INISH:		16/90
B/16/90	COMP	37.5	OF CASING			3 1/4 In.	1 3/8 in.	\times	DRILLI		K. W	arren
B/17/90		22.1		<u>39.5</u> 39.5	HAMMER WT	3 1/4 11.	140 lbs.	\leftarrow	PREPA	RED BY:	R. BI	urdine
B 17/80	12	22.1	30.0	38.3	HAMMER FALL	+	30 in.	\rightarrow	l			
DEPTH	CASING	SAMPLE	SAMPLE	SAMPLE	TO ALLES TO FALL		100		<u> </u>			
IN	BLOWS PER	BLOWS PER	NUMBER	DEPTH		FIELD	CLASSI	TCATIO	N AND	REMAR	KS	
FEET	FOOT	6 INCHES	3	POUNCE								
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1			_									
	1		_	ł	1							
1	ļ	ļ			İ							
j			-									
			⊣									
J .	ļ		⊣	ļ								
		5	_	4.0	SILT	(ML)						
		8	┥		Loose	, dark yello	wish-oran	ge, dry,				
├ -5.0		6	– S1	-	j				-	SAPROL	ITE-	
	ł	7	7	6.0]							
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				ì '				`				
			_									
				-	SILT	(MI)						
		9		9.0		, very pale	orange to	pale ve	lowish-	orange, d	irv.	
_10.0		7 ~	_ S2	-	mostly	y silt.		, ,		SAPROL	-	
		7										
		1	10	11.0	ł							
			┥									
			-									
] ,		-	,	ļ							
	<u> </u>		┪									
			7									
		15	 	14.0	QUT	MALLY						
_15.0	L İ	50/5 li	n.		SILT (Loose	, very pa le	orange to	pale vel	lowish-	orange o	irv	
[S3	-	mostly			الار د.ت		SAPROL	•	
				15.0		•			•	omr not	- 1 E	
			_]									
			4	1								
			⊣	ļ i								
	ļ		4									
	\	<u> </u>	4									
	ļ	504	. S4	19.0	l <u>.</u> .							
1		50/1 in	1. Joseph	_	No rec	covery.						
20.0	 	 	⊣ `	19.1								
BLOWS	E/ET DE	NSITY	PI OWS	T 001	SISTENCY	6440	E 10	CONTRA	NEAT 4	GPO IN) WAT	ER ABBREV.
						SAMPL S SPLIT SPO		MOSTLY				
0 - 4 6 - 10	LOOGE		0 - 2 3 - 4	80		T TUBE		SOME 2	0 - 45%	WD - WH		LING INTERED
11 - 30 31 - 50	MEDIU	M DENSE	5 - 8 9 - 15	ME STI	DIVM STAFF	U UNDISTURI	BED PISTON	LITTLE '	16 - 25% 5 - 10%	UR - NO		
51+		DENSE	16 - 30 31+	VE		X OTHER MR NO RECOVE			- 7%	BORING	NO.	SW104

SIRRINE BORING REPORT BORING REPORT PAGE 2 OF

BORING NO. SW104

DEPTH IN PEET	CASING BLOWS PER POOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	BAMPLE DEPTH RANGE		FIELD CLASSIF	CATION AND	REMARKS
	-	 	1					
]					
1			•					
		<u> </u>						
		50/5 in.	S 5	24.0	No rec	overy.		
_25.0				24.5				
			1		Note:	Drilling extremely slow	w and difficult.	
		<u> </u>	4					
			1			· -		
		 	1					
				00.0	CAND	V 011 T /M 1		
—30.0		50/1 ln.	\$6	29.0 29.2		<u>Y SILT (ML)</u> ense, pale yellowish-(orange, dry, mos	stly silt, few fine
_30.0]		sand,	trace mica.	-SAPROLITE (I	MICA SCHISTY
			1				TRANSITION 2	
							•	
	<u>. </u>]					
] .					
		50/3 in.		34.0	No rec	overy.		
—35.0				34.4				
			1					
]					
		<u> </u>	}					
]					
1			<u> </u>		Nata		ad wasan ta sha k	arabala
			}		Note:	approximately 2 feet		
— 40.0			1			BOTTOM OF EX	KPLORATION A	AT 39.5 FEET.
			1					
			}		Motor	Due to the density of	the material of	lydronunch was
					not att	empted. A 2.0 inch p	ermanent monit	oring well was
		 	1			ed. Stainless steel sci set with PVC riser to the		rom 19.98 to
]		35.0 16	POLYMICH EVEN TO CO	ire suitele.	
			1					
—45.0 BLOWS	ET DE	NSITY TE	SLOWS/F		SISTENCY	SAMPLE ID.	ICOMPONENT W	GROUND WATER ABBREV.
0.4	VERY L		0 - 2		ERY SOFT	S SPLIT SPOON	MOSTLY 80 - 100%	WD - WHILE DRILLING
5 - 10 11 - 30	LOOSE MEDIUI	M DENGE	3 - 4 5 - 8	×	OFT EDIUM STIFF	T TUBE U UNDISTURBED PISTON	SOME 30 - 45% LITTLE 16 - 25%	NE - NOT ENCOUNTERED UR - NOT READ
31 - 50 51+	DENSE VERY D		9 - 15 16 - 30 31+	VI	NFF Ery Stiff Ard	G GRAB SAMPLE X OTHER NR NO RECOVERY	FEW 5-10% TRACE db%	BORING NO. SW104

ENVIRONMENTAL TEST BORING REPORT **BORING NO.SW106** PROJECT: MEDLEY FARM RVFS PHASE II MEDLEY FARM STEERING COMMITTEE CLIENT: G-8026 JOB NO: ATLANTA TESTING & ENGINEERING CONTRACTOR: PAGE NO: 1 of 2 CME-550 ATV LOCATION: See Plan EQUIPMENT USED: **ELEVATION:** CORE 592.91 CASING **GROUND WATER** DEPTH TO: (fL) SAMPLER DATE START: 8/28/90 BARREL BOTTOM BOTTOM OF CASING OF HOLE DATE HRS AFTER DATE FINISH: WATER TYPE HSA 8/29/90 COMP DRILLER: . Warren 3/30/90 7.87 6 1/4 In. 1 3/8 ln. 21 24 21 SIZE ID PREPARED BY: R. Enright 140 lbs. **HAMMER WT** 30 in. HAMMER FALL CASING SAMPLER SAMPLE NUMBER SAMPLE DEPTH RANGE DEPTH BLOWS BLOWS IN FEET FIELD CLASSIFICATION AND REMARKS PER FOOT PER S INCHES 4.0 6 SILT (ML) **S1** -5.0 Very stiff, moderate yellowish-brown to grayish-orange, moist, mostly silt, few clay, micaceous, relict foliation. 6.0 9 -SAPROLITE (SCHIST)-9.0 Same as previous; except dark yellowish-brown to 8 moderate yellowish-brown, trace fine sand. - 10.0 **S2** 8 9 11.0 Note: Possible ground water at 14.0 feet. POORLY-GRADED SAND WITH CLAY (SP-SC) 14.0 Dense, moderate yellowish-brown to grayish-orange, 10 moist, mostly medium sand, few coarse and fine sand, few -15.0 **S**3 clay, micaceous, relict foliation. 20 16.0 -SAPROLITE (SCHIST)-

POORLY-GRADED SAND WITH SILT (SP-SM)

Dense to very dense, light gray to black, wet, mostly medium sand, few fine sand, trace coarse sand, trace clay.

-SAPROLITE (GRANITIC GNEISS)-

BLOWS/F	T. DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4 5 - 10 11 - 30	VERY LOOSE LOOSE MEDIUM DENSE		VERY SOFT SOFT MEDIUM STIFF	S SPLIT SPOON T TUBE U UNDISTURBED PISTON G GRAB SAMPLE	MOSTLY 50 - 100% SOME 30 - 46% UTTLE 16 - 25% FEW 5 - 10%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
31 - 50 51+	DENSE VERY DENSE	9 - 15 16 - 30 31 +	STIFF VERY STIFF HARD	X OTHER NR NO RECOVERY	TRACE 48%	BORING NO. SW106

19.0

S4

12

20.0

SIRRINE BORING REPORT BORING NO.

PAGE 2 OF

BORING NO. SW106

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	BAMPLE DEPTH RANGE		FIELD CLASSIF	FICATION AND	REMARKS
		21 29	94	21.0	Dense	LY-GRADED SAND to very dense, light grew fine sand, trace co	ray to black, we	t, mostly medium
							-	RANITIC GNEISS)-
						LY-GRADED SAND to very dense, light g		
_25.0		12 22	S 5	24.0	sand, 1	iew fine sand, trace co own, micaceous silty	oarse sand, trac	e clay; 0.4 feet of
		19 28		26.0		4	SAPROLITE (GI	RANITIC GNEISS)-
						BOTTOM OF EX	PLORATION A	T 26.0 FEET.
			Ì					
			1					
		-	1		Note:	Installed 2.0-inch per	manent monitori	ng well in the
_30.0			1		boreho	ole. The stainless ste	el screened inte	rval was from
		-	1		5.82 1€	et to 21.00 feet with a	a PVC riser pipe	to the surface.
			1			•	•	
		 	1					
			1					
		<u> </u>	ł					
			1					
—35.0		<u> </u>						
]					
		-						
			}					
40.0			1					
			}					
			j					
			ł					
			1					
		<u> </u>	1					
			1					
—45.0					ı			
BLOWS	/FT. DEI	NSITY E	LOWS/F	T. CON	SISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4 5 - 10	VERY L		0 - 2 3 - 4	80	RY SOFT	S SPUT SPOON T TUBE	MOSTLY 50 - 100% SOME 30 - 45%	WD - WHILE DRILLING NE - NOT ENCOUNTERED
11 - 30 31 - 50	MEDIUI DENSE	I DENSE	6 - 8 9 - 15 16 - 2 0	\$1	EDIUM STIFF NFF ERY STIFF	U UNDISTURBED PISTON G GRAB BAMPLE X OTHER	FEW 5-10% TRACE d%	UR - NOT READ
51+	VERY D	ENSE	31+		ARD	HR NO RECOVERY	THE WAY	BORING NO. SW106

	SULIA											
PROJE			FARM RI/F									
CLIENT			FARM STE	ERING C	OMMITTEE	FRING			JOB NO) :	G-	8026
	ACTOR				G & ENGINE	EHING			PAGE			of 2
	MENT U	SED: _	CME-550					CORE	LOCAT			e Plan 2.85
GROUNE	WATER		DEPTH TO			CASING	SAMPLER	BARREL	2475 6			29/90
DATE	HRS AFTER	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	s		DATE F		8/3	0/90
3/30/90	14	5.46		18.6	SIZE ID	6 1/4 in.	1 3/8 In.		DRILLE	RED BY:		arren
	•				HAMMER WT		140 lbs.		1	DI:	<u>J. M8</u>	rrigan
					HAMMER FALL		30 in.		L			
DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLEI BLOWS PER 6 INCHES	NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS							
			-									
1 1		 	┨	1								
			J									
j l			コ]								
] [_									
1		<u> </u>		2 5	SILTY	CLAY (CL)					
] k		5 17	+	3.5	Stiff to	very stiff, I	ight gray,	dry, mos	stly clav	, some s	ilt, few	
]		16	S1		mediu	m to fine gr	ain sand	(quartz),	few mid	ca.	••	
-5.0			9	5.5			-	ESIDUA	ווספ ן	_		
		<u>'</u>					-н	LJIUUA	L SUIL	,		
j 1												
}]	1	L						_	
			_			· ·		'			_ •	
[4		SILT (MI \						
1				105		<u>ML≀</u> tiff, yellow⊰	gray, sligh	itly mois	t, mosth	y silt. son	ne	
1 1		9	\dashv	8.5	mica,	few fine to i						
		10	S2	-	layerir	ng (mica).	•					
├ 10.0	~		15	10.5								
1				T			-S	APROLI	TE-			
1 1			_									
[_		ļ							
[- [<u> </u>	4	1								
1	-	<u> </u>	4		SILT (ML)						
1 1		11		13.5	Dense	, yellowish	gray, slig	htly mois	st, most	ly silt, so	me	
1 1		17	\dashv	'3.5	mica,	few fine to i	medium g	rain san	d; fine g	rained, r	elect	
1		23	S3	-	layerir	ng.						
15.0			4	15.5	[-s	APROLI	ITE (QU	JARTZ-M	ICA S	CHIST)-
1 1		<u>_</u>					_		• •			•
1			J			147. *	• موري					
{			コ		Note:	Wet auger	cuttings r	eturning	to surfa	3C 0 .		
1		<u> </u>	4		!							
1		<u> </u>	_	1	1							
		<u> </u>	+-	1	SILT	ML)						
1		15	- _{S4}	18.5	Very c	dense, hard	, yellowisi	h-gray, r	nostly s	ilt, some	mica,	
		34 5		20.0	19W fir	ne to mediu	ın grain sa 2.	ano. APROLI	TE (QI	JARTZ-M	ICA S	CHIST)-
20.0			' 	20.0	D	ОТТОМ ОР						
BLOWS	/FT. DE	NSITY	BLOWS/F	T. COM	SISTENCY	SAMPL		COMPO	NENT %	GROUNI	WATI	ER ABBREV.
0-4 5-10	VERY	LOOSE	0 - 2 3 - 4	VE 80	RY SOFT	S SPLIT SPO	ON	MOSTLY SOME	50 - 100% 30 - 45%	WD - WH	ILE DRIL T ENCOU	
11 - 30 31 - 50		M DENSE	5 - 8 9 - 15	ME	DIUM STIFF	G GRAB SAM	BED PISTON IPLE	FEW	15 - 25% 5 - 10%	UR - NO		
51+		DENSE	16 - 30 31+	VE	RY STIFF	X OTHER NR NO RECOV	į		ವ%	BORING	NO.	SW108

SIRRINE BORING REPORT BORING NO. SW 108 PAGE 2 OF 2

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	BAMPLE DEPTH RANGE		FIELD CLASSIF	FICATION AND	REMARKS	
					BOTT	OM OF EXPLORATION	ON AT 20.0 FEE	т.	
]						
]						
	_	ļ	↓		1				
		ļ	4		Note:	A 2 inch well was ins	tallad in the bear	hala Otalalaa	,
			1			creen was placed fro			S
			1			the surface.	111 19.19 10 4.10	100t With 1 VO	
			1						
- 25.0			1						
- 20.0]						
			4						
		 	-						
			-						
			1						
			1						
]						
]						
-30.0]						
		ļ	4						
			1						
			4						
			} .	į ,	ļ				
Ì			1 .						
			1						
			1						
-35.0			}						
-55.0]						
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			1 1						
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- 40.0									
			1						
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		 	1						
		 	1						
	-	 	1 1						
		 	1						
		l	{ ·						
		 	1						
-45.0									
LOWS	FT. DE!	VSITY E	LOWS/F	. CON	SISTENCY	SAMPLE ID.	COMPONENT %	GROUND WAT	R ABBR
-4	VERY L		0 - 2		RY SOFT	8 SPLIT SPOON T TUBE	MOSTLY 50 - 100%	WD - WHILE DRILL	
5 - 10 1 - 3 0	LOOSE	I DENSE	3 - 4 5 - 8	M	OFT EDIUM STIFF	U UNDISTURBED PISTON		NE - NOT ENCOU UR - NOT READ	HITERED
1 - 50 1+	DENSE VERY D	i i	9 - 15 16 - 30		NFF ERY STAFF	G GRAB SAMPLE X OTHER	FEW 5-10% TRACE 45%	BOBING NG	SW 108
	VEMY D		31+	Ň		NR NO RECOVERY		BORING NO.	- W 10

SIRRINE TEST BORING REPORT BORING NO.5W109

	ULIA			201405								
PROJE: CLIENT		EDLEY F	ARM RVF	ERING C	OMMITTEE		•				6	2006
	ACTOR				G & ENGINE	ERING			JOB NO		10	3026 14
EQUIPA	MENT US	BED:	CME-550	ATV					LOCAT		Sec	Plan
GROUND			DEPTH TO			CASING	SAMPLER	CORE	DATE 8			3.65 0/90
	COMP	******	BOTTOM OF CASING	OF HOLE	TYPE	HSA	8		DATE F		9/1 K. Wa	4/90
/11/90	WD	67.5	69.0	69.0	SIZE IO	6 1/4 ln.		$\langle \cdot \rangle$		RED BY:		rrigan
					HAMMER WT	\rightarrow	140 lbs. 30 in.	\times				
DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	8AMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS							
-5.0		6 11 11 11	S1	4.0 6.0	<u>SILT (</u> Very s	ML) tiff, medium	n brown, c	•	•	L SOIL-		
10.0		6 6 6 8	S2	9.0 11.0	CLAY (CL) Medium stiff, orange-red mottled with brown, dry, mostly clayRESIDUAL SOIL- SILT (ML) Medium dense, yellowish-tan, dry, mostly silt, some mica flakesRESIDUAL SOIL-							
_15.0		6 8 7 7	\$3	14.0 16.0	<u>SILT (</u> Mediu mica fl	m dense, li	ght green			ostly silt, L SOIL-	some	
20.0		4 6	\$4	19.0		ML) m dense, m silt, some		ct beddin	ıg.	— light gray TE (MIC)	-	
BLOWS	FT. DE	NSITY	BLOWS/F	r. CONS	SISTENCY	SAMPL	E ID.	_	-	•		R ABBREV
0 - 4 5 - 10 11 - 30 31 - 50 51+	VERY L	OOSE M DENSE	0 - 2 3 - 4 5 - 8 9 - 15 16 - 30 31+	VEI SO ME STI	RY SOFT FY DIUM STIFF FF RY STIFF	SPLIT SPOO	ON BED PISTON PLE	MOSTLY I SOME I LITTLE I FEW		WD - WH NE - NO UR - NO	ILE DRILI T ENCOU T READ	LING



DEPTH IN FEET	CASING BLOWS PER POOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	BAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS			
		7	S4	21.0	SILT (ML) Medium dense, medium gray mottled with light gray, dry, mostly silt, some mica; relict bedding.			
					-SAPROLITE (MICA SCHIST)-			
		6		24.0	SILT (ML)			
25.0	 ,	9 11 14	S 5	- 26.0	Medium dense, blue-gray mottled with greenish-gray, dry, mostly slit, some clay; relict bandingSAPROLITE (MICA SCHIST)-			
30.0		10 18 19	S6	29.0 	SILT (ML) Medium dense, blue-gray mottled with greenish-gray, dry, mostly sift, some clay; relict banding.			
		28		31.0	-SĂPROLITE (MICA SCHIST)-			
		15 30	S7	34.0	SILT (ML) Very dense, light bluish-gray mottled with greenish-gray,			
35.0		50/5 ln.	31	36.0	mostly silt, dry, some mica flakes; relict banding (near vertical)SAPROLITE (MICA SCHIST)-			
		50/5 in.	S8	39.0	SILT (ML)			
40.0			*	39.5	Very dense, medium gray, slightly moist, mostly silt, some mica; relict bedding. -SAPROLITE (MICA SCHIST)-			
					CLAYEY SILT (ML) Very dense, medium gray, wet, mostly silt, some clay, little			
—45.0		50/1 in.	59	44.0 44.1	1			
BLOWS	FT. DEN	ISITY B	LOWS/F1	. CONS	SISTENCY SAMPLE ID. COMPONENT % GROUND WATER ABBREV.			
0 - 4 5 - 10 11 - 30	VERY LOOSE MEDIUM		0 · 2 3 · 4 5 · 8 9 · 15	80 M	RRY SOFT S SPLIT SPOON MOSTLY 50 - 109% WD - WHILE DRILLING NE - NOT ENCOUNTERED UN INSTITUTE 16 - 29% UR - NOT READ UR - NOT READ UR - NOT READ			
31 - 50 51+	DENSE VERY DI	EMBE	16 - 30		RY STIFF X OTHER TRACE AND BORING NO. SW109			

SIRRINE BORING REPORT BORING NO. SW109 PAGE 3 OF 4

DEPTH IN FEET	CASING SAMPI SLOWS BLOW PER PER FOOT 6 INCH	NUMBER	BAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
— 50.0	50/5	ln. \$10	49.0 49.4	SILT (ML) Very dense, medium gray, moist, mostly silt, some mica; rock fragments, relict beddingSAPROLITE (MICA SCHIST)-
55.0	50/3	in. \$11	54.0 54.3	SILT (ML) Same as above, but only slightly molst, but weathered rock more competent; dark green stained fractures of near vertical orientation visible. -SAPROLITE (MICA SCHIST)-
60.0	50/3	in. \$12	59.0 59.3	SILT (ML) Very dense, medium gray, slightly moist, mostly slit, some mica; weathered rock fragments more competent; dark green stained fractures of near vertical orientation visibleTRANSITION ZONE (MICA SCHIST)-
— 65.0	50/2	In. \$13	64.0 64.2	SILT (ML) Very dense, medium gray, slightly moist, mostly silt, some mica; weathered rock fragments more compatent; dark green stained fractures of near vertical orientation visible. -TRANSITION ZONE (MICA SCHIST)-
70.0 BLOWS 0-4 5-10 11-30	50/1 FT. DENSITY VERY LOOSE LOOSE MEDIUM DENS	BLOWS/F	VI SK	SILT (ML) Very dense, medium gray, wet, mostly silt, some mica, few fine grain sand (quartz); weathered rock fragments more competent; dark green stained fractures of near vertical orientation visible. -TRANSITION ZONE (MICA SCHIST)- BOTTOM OF EXPLORATION AT 69.1 FEET. SISTENCY SAMPLE ID. COMPONENT % GROUND WATER ABBREV. ERY SOFT T TUBE BOTTOM OF EXPLORATION AT 69.1 FEET. SAMPLE ID. COMPONENT % GROUND WATER ABBREV. BOTTOM OF EXPLORATION AT 69.1 FEET. SISTENCY SAMPLE ID. COMPONENT % GROUND WATER ABBREV. BERLY SOFT T TUBE BUTTOM OF EXPLORATION AT 69.1 FEET. SOME 20 - 46% NE - NOT ENCOUNTERED UR - NOT READ UR - NOT READ UR - NOT READ



ENVIRONMENTAL TEST BORING REPORT

BORING NO. SW109

PAGE 4

SAMPLER SAMPLE NUMBER BLOWS PER POOT BLOWS PER 6 INCHES FIELD CLASSIFICATION AND REMARKS Note: A 2 inch well was installed in the borehole. Stainless steel screen was placed from 60.0 to 44.8 feet with a PVC riser to the surface. -75.0 80.0 85.0 90.0 96.0 BLOWS/FT. DENSITY BLOWS/FT. CONSISTENCY SAMPLE ID. COMPONENT % GROUND WATER ABBREV. VERY SOFT SOFT SPLIT SPOON MOSTLY 50 - 100% SOME 30 - 46% LITTLE 16 - 25% WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ 0 - 2 VERY LOOSE TUBE UNDISTURBED PISTON 5 - 10 LOOSE MEDIUM DENSE 3 - 4 ÿ MEDIUM STIFF STIFF VERY STIFF HARD GRAB SAMPLE FEW 5-1 9 - 15 5 - 10% 31 - 50 51+ DENRE OTHER NO RECOVERY VERY DENSE 16 - 30 SW109 BORING NO. 31+

ENVIRONMENTAL TEST BORING REPORT **BORING NO. PZ101** MEDLEY FARM RIFS PHASE H PROJECT: G-8026 JOB NO: MEDLEY FARM STEERING COMMITTEE CLIENT: PAGE NO: 1 of 3 ATLANTA TESTING & ENGINEERING CONTRACTOR: LOCATION: See Plan CME-550 ATV EQUIPMENT USED: 686.04 **ELEVATION:** GROUND WATER CASING SAMPLER CORE DEPTH TO: (fL) BARREL 8/14/90 **DATE START:** BOTTOM BOTTOM OF CASING OF HOLE DATE IRS AFTE WATER TYPE HSA S OF CASING 8/16/90 COMP DATE FINISH: 3/15/90 49.0 6 1/4 In. 1 3/8 In. 19 52.0 SIZE ID DRILLER: P. Bergman 3/15/90 49.0 140 lbs. 25 HAMMER WT 52.0 R. Enright PREPARED BY: 3/23/90 48.22 61.0 HAMMER FALL 30 ln. 215 59.0 AMPLER CASING SAMPLE SAMPLE DEPTH BLOWS BLOWS NUMBER FIELD CLASSIFICATION AND REMARKS PER FOOT PER 6 INCHES FEET BANGE SILT (ML) Loose, pale yellowish-brown, dry, mostly silt, trace fine 4.0 -RESIDUAL SOIL-5 8 **S1** -5.0 CLAYEY SILT (ML) 11 Very stiff, light brown to dark yellowish-orange, dry, mostly 6.0 13 silt, few clay, mottled. -SAPROLITE-**CLAYEY SILT (ML)** 3 Very stiff, light brown to dark yellowish-orange, dry, mostly 10.0 92 5 silt, few clay, mottled; except quartz stringer at 10.6 feet 4 11.0 and relict foliation. 14.0 **CLAYEY SILT (ML)** 4 Stiff, dark yellowish-orange, dry, mostly silt, few clay, _15.0 **S3** 5 mottled, relict foliation. 7 16.0 -SAPROLITE-**CLAYEY SILT (ML)** Stiff, dark yellowish-orange, except patches of moderate 19.0 red and dusty brown, dry, mostly silt, few clay, mottled, relict foliation. 3 **S4** 20.0

BLOWS/FT.

0 - 4

5 - 10

11 - 30 31 - 50

51+

DENSITY

VERY LOOSE

VERY DENSE

MEDIUM DENSE

BLOWS/FT. CONSISTENCY

0 - 2

3 - 4

5-8

9 - 16

16 - 30

VERY SOFT

VERY STIFF

MEDIUM STIFF

SOFT

STIFF

SAMPLE ID.

GRAB SAMPLE

OTHER NO RECOVERY

G

UNDISTURBED PISTON

COMPONENT % GROUND WATER ABBREV.

WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ

BORING NO. PZ101

MOSTLY 50 - 100%

15 - 25%

6 - 10%

SOME

FEW TRACE



DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	BAMPLE DEPTH RANGE		FIELD CLASSIF	FICATION AND	REMARKS
		5 6	S4	21.0			<u> </u>	
			1		1			
]	[
	 		-		 			
	<u> </u>		1	24.5	CLAV	EY SILT (ML)		
25.0		5	S5	24.0	Very s	stiff, grayish to dusky y	yellow, dry, most	ly silt, few clay,
		7 10		26.0	relict 1	oliation.	-s	APROLITE-
]					
			1					
			1			·		
		3	1	29.0		EY SILT (ML)	uallan de	de atta dans ala
30.0	 -	6 8	S6	-		itiff, grayish to dusky y oliation.	-	•
	 	9	 	31.0	1		-\$	SAPROLITE-
Ì			1					
			1					
						EV 60 T 42''		
		7	-	34.0	Very s	EY SILT (ML) stiff, grayish to dusky y	yellow, dry, most	ly silt, few clay,
—35.0		11	S 7	36.0	relict f	oliation.	. s	SAPROLITE-
		15	1		Note:	Drilling becoming mo	on difficult at 35	0 feet
	 		d		1,1018.		umwun at 00,	
}	 			20.5		EY SILT (ML)		
 40.0		9 13	S8	39.0 	Very s	stiff, grayish to dusky yoliation, except hard.		lly silt, few clay,
		17 24	1	41.0]		-\$	SAPROLITE-
			-]			
			1			EY SILT (ML)		
	— —		1		Hard,	grayish to dusky yello ne sand, relict foliation	1.	-
	<u> </u>	43		44.0	.5"	rener lendile!	-S	SAPROLITE-
—45.0	ļ 	100/3 In	S9	44.9	.			
BLOWS	/FT. DEN	NSITY E	BLOWS/F1	r. con	SISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4 5 - 10	VERY LI		0 - 2 3 - 4 5 - 8	80	ERY SOFT OFT EDIUM STIFF	8 SPLIT SPOON T TUBE U UNDISTURBED PISTON	MOSTLY 80 - 100% SOME 20 - 46% LITTLE 15 - 25%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
11 - 30 31 - 50 51+	MEDIUN DENSE VERY D		9 - 15 16 - 3 0	81 VI	TIFF ERY STIFF	G GRAB SAMPLE X OTHER NR NO RECOVERY	FEW \$ - 10% TRACE -5%	BORING NO. PZ101
<u> </u>			31+	H	ARD	THE HU NEWYERT	L	

BORING NO. PZ101

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	BAMPLE DEPTH RANGE		FIELD CLASSIF	TCATION AND I	REMARKS
					Note: table.	Soil samples moist at	44.0 feet possib	bly near water
			1		LELURO.			
		-						
	-		1					
			<u> </u>		A 1 434			
_50.0		52 78/3.5 in	S10	49.0 49.8	Hard, g	<u>EY SILT (ML)</u> grayish to dusky yello	w, moist, mostly	silt, few fine
]		sand, i	relict foliation.	-\$	APROLITE-
			1					
			1					
1			}					
			{					
—55.0			1		Note:	Static water level at 4	IO O feet below a	iround eurface
			1		Due to	dense material drillin	g is slow. No sp	olit spoons taken
			}		from 4	9.8 to 61.0 feet due to	density of mate	erial.
			1					
	-							
-60.0								
			 					
			1			BOTTOM OF EXP	PLUKATION AT	OI.U PEEI.
			1					510
	· · · · · · · · ·		}			Installed permanent 1 I4.0 to 59.0 feet with I		
			1					
— 65.0			}					
	-		}		,			
			1					
		<u> </u>	1					
			1					
—70.0		10125			NOTENION.	CAMPLETO	(SAUDANEN E)	COROLINO WATER ARETE
BLOWS	/FT. DEI VERY L		0 · 2		ERY SOFT	SAMPLE ID. 8 SPLIT SPOON	MOSTLY 50 - 100%	GROUND WATER ABBREV WD - WHILE DRILLING
5 - 10 11 - 3 0	LOOSE MEDIUI	I DENSE	3 - 4 5 - 8 9 - 15	84 M	OFT EDIUM STIFF DFF	T TUBE U UNDISTURBED PISTON G GRAB SAMPLE	SOME 30 - 45% LITTLE 16 - 25% FEW 6 - 10%	NE - NOT ENCOUNTERED UR - NOT READ
31 - 50 51+	DENSE VERY D		16 - 30 31+	٧	RY STIFF ARD	X OTHER NR NO RECOVERY	TRACE dith	BORING NO. PZ101

TEST BORING REPORT BORING NO. SB1 CONSULTANTS PROJECT: MEDLEY FARM RI/FS PHASE IB MEDLEY FARM STEERING COMMITTEE CLIENT: G-8026 JOB NO: **ENVIRONMENTAL DRILLING & SERVICES** CONTRACTOR: PAGE NO: 1 of 2 MOBILE DRILL B-33 ATV EQUIPMENT USED: LOCATION: See Plan **ELEVATION:** CORE GROUND WATER DEPTH TO: (ft.) CASING SAMPLER DATE START: 1/9/90 BARREL DATE FINISH: BOTTOM BOTTOM DATE HRS AFTER 1/9/90 WATER TYPE HSA COMP OF HOLE OF CASING DRILLER: A. Davis NE 1 3/8 in. 3 1/4 in. 1/9/90 .5 25.0 27.0 SIZE ID PREPARED BY: R. L. Burdine HAMMER WT 140 lbs HAMMER FALL 30 in. CASING BLOWS PER FOOT SAMPLER SAMPLE SAMPLE DEPTH BLOWS NUMBER DEPTH IN FEET FIELD CLASSIFICATION AND REMARKS PER 6 INCHES -5.0 5.0 SILT (ML) Medium stiff, reddish-orange, slightly moist, mostly silt, S1 9 some clay, trace mica. 7.0 9 -RESIDUAL SOIL--10.0 10.0 SILT (ML) S2 Soft, tan to light reddish-brown, dry, mostly silt, few 3 clay, trace mica. 12.0 -RESIDUAL SOIL-_15.0 15.0 SILT (ML) 5 Soft, tan to light reddish-brown, dry, mostly **S3** silt, few clay, trace mica. 8 17.0 -RESIDUAL SOIL-

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4 5 - 10 11 - 30 31 - 50	VERY LOOSE LOOSE MEDIUM DENSE	0 - 2 3 - 4 5 - 8 9 - 15	VERY SOFT SOFT MEDIUM STIFF STIFF	S SPLIT SPOON T TUBE U UNDISTURBED PISTON G GRAB SAMPLE	MOSTLY 50 - 100% SOME 30 - 45% LITTLE 15 - 25% FEW 5 - 10%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
	DENSE VERY DENSE	16 - 30 31+	VERY STIFF HARD	X OTHER NR NO RECOVERY	TRACE <5%	BORING NO. SB1

20.0

ENVIRONMENTAL TEST BORING REPORT PAGE 2 OF

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE		FIELD CLASSIF	FICATION AND I	REMARKS
		3		20.0	SILT (M	L)		
ļ		6	S4		Loose, t	an, dry, mostly silt;	relict jointing stai	ned black.
		8					.9.	APROLITE-
		11		22.0			-3	AI NOEITE
		ļ	4					
ŀ		 	1					
								
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- 25.0			<u> </u>		SILT (M	, , , , , , , , , , , , , , , , , , ,		
		3	1	25.0		터 an, dry, mostly silt; i	relict iointing stai	ned black.
		8	S5		20000, 1	an, ary, moony one,	oner journing oran	7100 01do
	. •	10	-	27.0			-S	APROLITE-
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-30.0		 	1		Note	* Tromio accusa d	harabala fram 07	ft to the
}			1		Note		borehole from 27 ut / 3% Bentonite	n, to the by weight
Ì			1			mixture.	at / 5 /6 Demonite	by weight
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BLOWS	/FT. DE	NSITY I	BLOWS/F	T. CON	SISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBRI
0 - 4	VERY I		0 - 2 3 - 4			S SPLIT SPOON	MOSTLY 50 - 100% SOME 30 - 45%	WD - WHILE DRILLING NE - NOT ENCOUNTERED
5 - 10 11 - 30		M DENSE	5 - 8		EDIUM STIFF	J UNDISTURBED PISTON G GRAB SAMPLE		UR - NOT READ

SIRRINE **TEST BORING REPORT** BORING NO. SB2 **CONSULTANTS** PROJECT: MEDLEY FARM RIFS PHASE IB MEDLEY FARM STEERING COMMITTEE CLIENT: G-8026 JOB NO: FROEHLING & ROBERTSON, INC. CONTRACTOR: PAGE NO: 1 of 2 CME-55 ATV LOCATION: EQUIPMENT USED: See Plan **ELEVATION:** CORE **GROUND WATER** CASING SAMPLER DEPTH TO: (ft.) DATE START: BARRE 1/24/90 HRS AFTER BOTTOM BOTTOM **DATE FINISH:** WATER 1/24/90 TYPE **HSA** S COMP OF CASING OF HOLE DRILLER: B. Maxwell 3 1/4 In. 1 3/8 in. 1/24/90 NE 27.0 .5 25.0 SIZE ID PREPARED BY: R. L. Burdine 140 lbs. **HAMMER WT** 30 in. HAMMER FALL SAMPLER CASING SAMPLE SAMPLE DEPTH BLOWS BLOWS IN FEET NUMBER DEPTH RANGE FIELD CLASSIFICATION AND REMARKS PER FOOT 6 INCHES SILTY CLAY (CL) 3.0 Soft to medium stiff, reddish-orange, dry, mostly clay, some 4 silt. S₀ --5 -RESIDUAL SOIL-8 5.0 -5.0 3 5.0 SILTY CLAY (CL) 4 Soft to medium stiff, reddish-orange, dry, mostly clay, some S1 6 silt, trace quartz. 7.0 -RESIDUAL SOIL-- 10.0 10.0 SILT (ML) 6 S2 Loose, tan to light brown, dry, mostly silt. 9 13 12.0 -SAPROLITE-_15.0 15.0 SILT (ML) 16 Loose, tan to light brown, dry, mostly silt. **S**3 17 -SAPROLITE-17.0 23 20.0

BLOWS/	FT. DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4 5 - 10 11 - 30	VERY LOOSE LOOSE MEDIUM DENSE		VERY SOFT SOFT MEDIUM STIFF	S SPLIT SPOON T TUBE U UNDISTURBED PISTON G GRAB SAMPLE	MOSTLY 50 - 100% SOME 30 - 45% LITTLE 15 - 25% FEW 5 - 10%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
31 - 50 51+	DENSE VERY DENSE	9 - 15 16 - 30 31+	STIFF VERY STIFF HARD	X OTHER NR NO RECOVERY	TRACE <5%	BORING NO. SB2

SIRRINE _

ENVIRONMENTAL CONSULTANTS TEST BORING REPORT PAGE 2 OF 2

BORING NO. SB2

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE		FIELD CLASSII	FICATION AND	REMARKS
		11 19 32	S4	20.0	SILT (I Loose,	<u>/IL)</u> tan to light brown, d		
		44		22.0			-S	APROLITE-
			1					
			1					
- 25.0		20	_	25.0	SILT (N	<u>!L)</u>		
		32 50/5	S5			tan to light brown, di	ry, mostly silt.	
	 .			26.0			-S	APROLITE-
			1					
			1					
-30.0		<u> </u>	1		Mak	or Tanamia accorded	havahala 4 00	2 6 4
		<u> </u>	1		Note	surface with gro	borehole from 26 ut / 3% Bentonite	
			1			mixture.		
			1					
			1					
-35.0]					
55.5			}					
			}					
			}					
			}					
40.0			1					
- 40.0			}					
			1					
			7					
			1					
45.0			1					
-45.0 LOWS	/FT. DE	NSITY] BLOWS/F	T. CONS	SISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBRE
) - 4 6 - 10 1 - 30		M DENSE	0 - 2 3 - 4 5 - 8	SC M	OFT EDIUM STIFF	S SPLIT SPOON T TUBE U UNDISTURBED PISTON G GRAB SAMPLE	MOSTLY 50 - 100% SOME 30 - 45% LITTLE 15 - 25%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
1 - 50 1+	DENSE VERY D		9 - 15 16 - 30 31+	VE	TIFF ERY STIFF ARD	X OTHER NR NO RECOVERY	FEW 5 - 10% TRACE <5%	BORING NO. SB2

SIRRINE **TEST BORING REPORT** BORING NO. SB3 CONSULTANTS PROJECT: MEDLEY FARM RI/FS PHASE IB MEDLEY FARM STEERING COMMITTEE CLIENT: G-8026 JOB NO: FROEHLING & ROBERTSON, INC. CONTRACTOR: PAGE NO: 1 of 2 CME-55 ATV LOCATION: EQUIPMENT USED: See Plan **ELEVATION:** CORE SAMPLER **GROUND WATER** DEPTH TO: (ft.) CASING DATE START: 1/20/90 BARRE IRS AFTER BOTTOM BOTTOM DATE FINISH: DATE WATER TYPE 1/20/90 HSA COMP OF CASING OF HOLE DRILLER: B. Maxwell 3 1/4 in. 1 3/8 in. NE 1/20/90 .5 25.0 27.0 SIZE ID PREPARED BY: R. L. Burdine 140 lbs. HAMMER WT 30 in. HAMMER FALL CASING SAMPLER SAMPLE SAMPLE DEPTH BLOWS BLOWS DEPTH RANGE NUMBER IN FEET FIELD CLASSIFICATION AND REMARKS 6 INCHES FOOT **CLAYEY SILTY (ML)** Soft, dark brown to black, moist, mostly silt, some clay. -FILL--5.0 5.0 6 8 SILTY CLAY (CL) S1 Stiff, reddish-orange, dry, mostly clay, little silt, trace mica. 9 7.0 11 -RESIDUAL SOIL-_10.0 SILTY CLAY (CL) 4 10.0 Stiff, reddish-orange, dry, mostly clay, little silt, trace mica. 6 S2 -RESIDUAL SOIL-12.0 6 -15.0 15.0 6 SILT (ML) **S**3 8 Loose, gray to tan, dry, mostly silt, few clay, trace mica flakes. 17.0 8

		_1 1	1			i
BLOWS	FT. DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4 5 - 10 11 - 30	VERY LOOSE LOOSE MEDIUM DENSE DENSE	0 - 2 3 - 4 5 - 8 9 - 15	VERY SOFT SOFT MEDIUM STIFF STIFF	S SPLIT SPOON T TUBE U UNDISTURBED PISTON G GRAB SAMPLE	MOSTLY 50 - 100% SOME 30 - 45% LITTLE 15 - 25% FEW 5 - 10%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
31 - 50 51+	VERY DENSE	16 - 30 31+	VERY STIFF HARD	X OTHER NR NO RECOVERY	TRACE 45%	BORING NO. SB3

20.0

-SAPROLITE-

ENVIRONMENTAL CONSULTANTS TEST BORING REPORT PAGE 2 OF 2

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE		FIELD CLASSIF	FICATION AND	REMARKS
		6		20.0	SILT (
		7	S4		Loose, flakes.	gray to tan, dry, mos	stly silt, few clay,	trace mica
		11	1	22.0	liakes.		-\$	APROLITE-
]					
		ļ	}					
		 	1		1			
25.0			1		SILT (N	#1 \		
		10	-	25.0		o medium dense, gra	ay, dry, mostly si	It, trace mica flakes.
		16 _ 15	S5			, 3		
		17	1	27.0			-S	APROLITE-
						Bottom of Expl	oration at 27.0 f	t.
		 	1					
			1					
]					
—30.0			1		Note			
			1		Note	Tremie grouted to surface with group		
			1			mixture.	ot 7 5 76 bentonite	by weight
]					
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45.0	 		-					
BLOWS	FT. DE	NSITY	BLOWS/F	T. CON	SISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV
0 - 4 5 - 10 11 - 30	VERY L LOOSE		0 - 2 3 - 4 5 - 8	S	ERY SOFT OFT EDIUM STIFF	S SPLIT SPOON T TUBE U UNDISTURBED PISTON	MOSTLY 50 - 100% SOME 30 - 45% LITTLE 15 - 25%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
31 - 50 51+	DENSE VERY D	1	9 - 15 16 - 30	V	TIFF ERY STIFF	G GRAB SAMPLE X OTHER	FEW 5 - 10% TRACE <5%	BORING NO. SB3
			31+	H	ARD	NR NO RECOVERY	<u> </u>	2011110 110. 000

SIRRINE **TEST BORING REPORT** BORING NO. SB4 **CONSULTANTS** MEDLEY FARM RI/FS PHASE IB PROJECT: MEDLEY FARM STEERING COMMITTEE CLIENT: G-8026 JOB NO: FROEHLING & ROBERTSON, INC. CONTRACTOR: PAGE NO: 1 of 2 CME-55 ATV LOCATION: See Plan EQUIPMENT USED: **ELEVATION:** CORE GROUND WATER CASING SAMPLER DEPTH TO: (ft.) DATE START: BARREL 1/20/90 BOTTOM HRS AFTE BOTTOM **DATE FINISH:** WATER 1/20/90 S **TYPE HSA** OF CASING COMP OF HOLE DRILLER: B. Maxwell NE 3 1/4 in. 1 3/8 in. /20/90 SIZE ID 27.0 .5 25.0 PREPARED BY: R. L. Burdine 140 lbs HAMMER WT 30 in. HAMMER FALL CASING SAMPLER SAMPLE NUMBER DEPTH SAMPLE BLOWS BLOWS DEPTH FIELD CLASSIFICATION AND REMARKS FEET PER PFR RANGE FOOT 6 INCHES -5.0 SILTY CLAY (CL) 5.0 9 Stiff, reddish-orange, dry, mostly clay, some silt, trace 11 **S**1 -mica flakes. 11 7.0 13 -RESIDUAL SOIL-_10.0 **CLAYEY SILT (ML)** 10.0 Loose, reddish-orange and tan, dry, mostly silt, little clay, 5 S2 trace mica flakes, trace quartz gravel. 6 -SAPROLITE-12.0 6 -15.0 **CLAYEY SILT (ML)** 15.0 Loose, reddish-orange and tan, dry, mostly silt, little clay, 6 **S3** trace mica flakes, trace quartz gravel. 17.0 -SAPROLITE-20.0

BLOWS/F	T. DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GHOUND WATER ABBREV.
0 - 4 5 - 10 11 - 30 31 - 50	VERY LOOSE LOOSE MEDIUM DENSE DENSE	0 - 2 3 - 4 5 - 8 9 - 15	VERY SOFT SOFT MEDIUM STIFF STIFF	T TUBE S U UNDISTURBED PISTON L	MOSTLY 50 - 100% SOME 30 - 45% JITLE 15 - 25% EW 5 - 10%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
51+	VERY DENSE	16 - 30 31+	VERY STIFF	1	TRACE <5%	BORING NO. SB4

ENVIRONMENTAL CONSULTANTS TEST BORING REPORT PAGE 2 OF 2

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE		FIELD CLASSIF	FICATION AND	REMARKS
		4 7	S4	20.0	Loose, t	Y SILT (ML) an to reddish-orang ce mica flakes.	e to red, dry, mo	estly silt, little
		8		22.0	olay, irai	oo mida nakes.	-S	APROLITE-
			}					
			}					
Ì								
- 25.0		6	 	25.0	CLAYE	SILT (ML)		41
		7	S5			an to reddish-orang ca flakes.	e to red, dry, mo	stly silt, little clay,
		10		27.0			-S	APROLITE-
			1			Bottom of Expl	oration at 27.0	ft.
			-	:				
								•
-30.0			-		Note	Tremie grouted I	borehole from 27	7 ft. to the
}]			surface with grown mixture.		
			1			mixture.		
			1					
			1					
ŀ								
-35.0]					
			1					
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-45.0			<u> </u>					
LOWS	FT. DEI	NSITY E] BLOWS/F1	r. CONS	SISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBR
-4 -10 1 - 30	VERY L	OOSE	0 - 2 3 - 4 5 - 8	VE SC ME	RY SOFT S OFT T EDIUM STIFF U	SPLIT SPOON TUBE UNDISTURBED PISTON	MOSTLY 50 - 100% SOME 30 - 45% LITTLE 15 - 25%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
- 50	DENSE		9 - 15 16 - 30		RY STIFF	GRAB SAMPLE OTHER	FEW 5 - 10% TRACE <5%	BORING NO. SB4

SIRRINE **ENVIRONMENTAL TEST BORING REPORT** BORING NO. SB5 CONSULTANTS PROJECT: MEDLEY FARM RI/FS PHASE IB MEDLEY FARM STEERING COMMITTEE CLIENT: G-8026 JOB NO: FROEHLING & ROBERTSON, INC. CONTRACTOR: PAGE NO: 1 of 2 CME-55 ATV EQUIPMENT USED: LOCATION: See Plan **ELEVATION:** CORE GROUND WATER DEPTH TO: (ft.) CASING SAMPLER **DATE START:** 1/24/90 BARREL HRS AFTER BOTTOM | BOTTOM DATE DATE FINISH: 1/24/90 WATER TYPE S HSA COMP OF CASING OF HOLE DRILLER: B. Maxwell 3 1/4 in. NE 1 3/8 in. /24/90 .5 25.0 27.0 SIZE ID PREPARED BY: R. L. Burdine 140 lbs. HAMMER WT HAMMER FALL 30 in. CASING SAMPLER SAMPLE SAMPLE DEPTH BLOWS PER **BLOWS** NUMBER FIELD CLASSIFICATION AND REMARKS PER FOOT FEET RANGE 6 INCHES Note: Soil is stained purple to 6 inches below surface. 2.0 SILTY CLAY / CLAYEY SILT (CL/ML) Medium stiff to stiff, reddish-orange, dry, mostly silt/clay, SO 9 trace mica flakes. 11 4.0 -RESIDUAL SOIL--5.0 5.0 5 CLAYEY SILT (ML) S1 Soft to medium stiff, reddish-orange to reddish brown, dry, 6 mostly silt, little clay, trace mica flakes. 7.0 6 -SAPROLITE-SILT (ML) _10.0 Loose to dense, gray to light brown, dry, mostly silt, trace 10.0 S2 rock (schist) gravel, few mica flakes. 50/5 11.0 -SAPROLITE--15.0 SILT (ML) 15.0 Loose to dense, gray to light brown, dry, mostly silt, 19 **S3** trace rock (schist) gravel, few mica flakes. 13 17.0 14 -SAPROLITE-20.0

	DENSE VERY DENSE	16 · 30 31+	VERY STIFF HARD	X OTHER NR NO RECOVERY	TRACE <5%	BORING NO. SB5
5 - 10 11 - 30	VERY LOOSE LOOSE MEDIUM DENSE	0 - 2 3 - 4 5 - 8 9 - 15	VERY SOFT SOFT MEDIUM STIFF STIFF	S SPLIT SPOON T TUBE U UNDISTURBED PISTON G GRAB SAMPLE	MOSTLY 50 - 100% SOME 30 - 45% LITTLE 15 - 25% FEW 5 - 10%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV

ENVIRONMENTAL CONSULTANTS TEST BORING REPORT PAGE 2 OF 2

BORING NO. SB5

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE		FIELD CLASSIF	ICATION AND F	REMARKS
		5		20.0	SILT (M			
}		8	S4			dense, gray to light		stly silt, trace
		8	-	22.0	rock (sc	hist) gravel, few mic	a liakes.	APROLITE-
ŀ		-		22.0				
Į			1					
[}					
ļ	-			1	ĺ			
		 	ł					
25.0		8	 	25.0	SILT (M			
		9	S5			dense, gray to light		stly silt, trace rock
Ţ		11	35		(scnist)	gravel, few mica flak		APROLITE-
- 1		7_	ļ	27.0	ļ			AFROLITE
			-			Bottom of Explo	oration at 27.0 f	t.
ł		<u> </u>	1	1				
]					
{			1	1	 			
-30.0		<u> </u>	1	1	A1			
-		<u> </u>	1		Note	 Tremie grouted to surface with groute 		
ł			1			mixture.	n / 3% bentonne	by weight
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		 	4					
		 	1					
-45.0		 	1					
	/FT DE	NSITY I	BLOWS/F	T. CON	SISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABB
LOWS								
3LOWS 0 - 4 5 - 10 1 - 30	VERY L		0 - 2 3 - 4 5 - 8	s	OFT	S SPLIT SPOON T TUBE U UNDESTURBED PISTON	MOSTLY 50 - 100% SOME 30 - 45% LITTLE 15 - 25%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ

SIRRINE TEST BORING REPORT **ENVIRONMENTAL** BORING NO. SB6 CONSULTANTS PROJECT: MEDLEY FARM RI/FS PHASE IB MEDLEY FARM STEERING COMMITTEE CLIENT: G-8026 JOB NO: FROEHLING & ROBERTSON, INC. CONTRACTOR: PAGE NO: 1 of 2 CME-55 ATV LOCATION: **EQUIPMENT USED:** See Plan **ELEVATION:** CORE **GROUND WATER** SAMPLER DEPTH TO: (ft.) CASING DATE START: 1/19/90 BARRE BOTTOM | BOTTOM DATE FINISH: WATER S 1/19/90 HSA COMP OF CASING OF HOLE DRILLER: B. Maxwell 3 1/4 in. 1 3/8 in NE 1/19/90 25.0 27.0 SIZE ID PREPARED BY: R. L. Burdine 140 lbs. HAMMER WT 30 in. HAMMER FALL CASING SAMPI FR SAMPLE SAMPLE DEPTH BLOWS BLOWS NUMBER DEPTH IN FEET FIELD CLASSIFICATION AND REMARKS PER FOOT PER 6 INCHES RANGE -5.0 SILTY CLAY (CL) 5.0 Medium dense, reddish-orange, dry, mostly clay, little silt. 10 S1 12 -RESIDUAL SOIL/FILL-7.0 15 - 10.0 CLAYEY SILT (ML) 10.0 Loose, reddish-orange and tan, dry, mostly silt, few clay, 3 S2 trace mica flakes. 4 -SAPROLITE-12.0 -15.0 **CLAYEY SILT (ML)** 15.0 Loose, reddish-orange and tan, dry, mostly silt, few clay, 4 trace mica flakes, trace quartz gravel and coarse sand. •• **S3** 6 8 17.0 -SAPROLITE-- 20.0 COMPONENT % GROUND WATER ABBREV. BLOWS/FT. DENSITY BLOWS/FT. CONSISTENCY SAMPLE ID. SPLIT SPOON MOSTLY 50 - 100% VERY LOOSE 0 - 2 VERY SOFT WD - WHILE DRILLING TUBE SOME 30 - 45% 5 - 10 LOOSE 3 · 4 5 - 8 SOFT NE - NOT ENCOUNTERED UR - NOT READ 15 - 25% MEDIUM DENSE MEDIUM STIFF UNDISTURBED PISTON **UTTLE** 11 - 30 31 - 50 G GRAB SAMPLE X OTHER NR NO RECOVERY GRAB SAMPLE DENSE VERY DENSE 9 - 15 STIFF **FFW** VERY STIFF TRACE **₹**5% 16 - 30 51+ BORING NO. SB6

HARD

SIRRINE

ENVIRONMENTAL CONSULTANTS TEST BORING REPORT PAGE 2 OF 2

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE		FIELD CLASSIF	ICATION AND F	REMARKS
		3 6 8 10	S4	20.0 22.0	Loose, ta	SILT (ML) n to reddish-orange e mica flakes.		stly silt, little
-25.0		4 8 10	S5	25.0 27.0		SILT (ML) n to reddish-orange a flakes.		stly silt, little clay, APROLITE-
				21.0		Bottom of Explo	oration at 27.0 f	t.
-30.0					Note:	Tremie grouted b surface with grou mixture.		
-35.0								
- 40.0								
			† - -					
-45.0 3LOWS	/ET DE	NSITY	BLOWS/F	T - CON	SISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBRI
0 - 4 5 - 10 11 - 30 31 - 50	VERY L LOOSE MEDIU DENSE	OOSE M DENSE	0 - 2 3 - 4 5 - 8 9 - 15 16 - 30	VI SX M S:	ERY SOFT S DET T EDIUM STIFF U GERY STIFF X	SAMPLE ID. SPUT SPOON TUBE UNDISTURBED PISTON GRAB SAMPLE OTHER R NO RECOVERY	MOSTLY 50 - 100% SOME 30 - 45% UTTLE 15 - 25% FEW 5 - 10% TRACE <5%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ BORING NO. SB6

SIRRINE **TEST BORING REPORT ENVIRONMENTAL** BORING NO. SB7 CONSULTANTS MEDLEY FARM RI/FS PHASE IB PROJECT: MEDLEY FARM STEERING COMMITTEE CLIENT: G-8026 JOB NO: FROEHLING & ROBERTSON, INC. CONTRACTOR: PAGE NO: 1 of 2 CME-55 ATV EQUIPMENT USED: LOCATION: See Plan **ELEVATION:** CORE GROUND WATER CASING SAMPLER DEPTH TO: (ft.) DATE START: BARRE 1/19/90 HRS AFTE BOTTOM | BOTTOM OF HOLE DATE FINISH: DATE WATER TYPE HSA S 1/19/90 COMP OF CASING DRILLER: B. Maxwell NE 3 1/4 in. 1 3/8 in. 25.0 27.0 SIZE ID 1/19/90 .5 PREPARED BY: R. L. Burdine 140 lbs. HAMMER WT 30 in. HAMMER FALL SAMPLER CASING SAMPLE SAMPLE DEPTH BLOWS BLOWS DEPTH NUMBER IN FEET FIELD CLASSIFICATION AND REMARKS PER FOOT PFR RANGE 6 INCHES 5.0 SILTY CLAY (CL) 6 5.0 Medium stiff, orangish-red, dry, mostly clay, little silt, trace 6 S₁ -quartz gravel. 7 7.0 6 -RESIDUAL SOIL-10.0 **CLAYEY SILT (ML)** 10.0 Loose, orange-red-tan, dry, mostly silt, little clay, trace 4 S2 mica flakes. 6 -SAPROLITE-12.0 -15.0 SILT (ML) 15.0 Loose, tan, dry, mostly silt, trace mica flakes. S3 --9 17.0 9 -SAPROLITE-20.0 BLOWS/FT. DENSITY BLOWS/FT. CONSISTENCY SAMPLE ID. COMPONENT % **GROUND WATER ABBREV.** SPLIT SPOON MOSTLY 50 - 100% VERY SOFT VERY LOOSE 0 - 2 WD - WHILE DRILLING TUBE 30 - 45% 5 - 10 11 - 30 LOOSE MEDIUM DENSE 3 - 4 SOFT UNDISTURBED PISTON GRAB SAMPLE MEDIUM STIFF LITTLE 15 - 25% UR - NOT READ DENSE VERY DENSE FEW 5 - 10% 31 - 50 9 - 15 STIFF X OTHER NR NO RECOVERY VERY STIFF TRACE <5%

BORING NO. SB7

16 - 30

HARD

31+

51+

SIRRINE

ENVIRONMENTAL CONSULTANTS TEST BORING REPORT PAGE 2 OF

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE		FIELD CLASSIF	ICATION AND F	REMARKS
		5 6 8 9	S4	20.0 22.0	SILT (ML Loose, ta) n, dry, mostly silt, to		APROLITE-
— 25.0		7 10 12	S5	25.0 	<u>SILT (ML</u> Loose, gr) ay, dry, mostly silt,		s. APROLITE-
		10		27.0		Bottom of Explo		
—30.0					Note:	Tremie grouted b surface with grou		
			<u>{</u>			mixture.		
— 35.0								
40.0								
—45.0			<u></u>					
BLOWS			BLOWS/F		SISTENCY S	SAMPLE ID. SPLIT SPOON	MOSTLY 50 - 100%	GROUND WATER ABBREV. WD - WHILE DRILLING
0 - 4 5 - 10 11 - 30 31 - 50 51+	VERY (LOOSE MEDIU DENSE VERY (M DENSE	3 - 4 5 - 8 9 - 15 16 - 30 31+	SI M Si Vi	OFT TEDIUM STIFF GERY STIFF X	TUBE UNDISTURBED PISTON GRAB SAMPLE	SOME 30 - 45% LITTLE 15 - 25% FEW 5 - 10% TRACE 45%	NOT ENCOUNTERED UR - NOT READ BORING NO. SB7

SIRRINE **ENVIRONMENTAL TEST BORING REPORT** BORING NO. SB8 **CONSULTANTS** MEDLEY FARM RI/FS PHASE IB PROJECT: MEDLEY FARM STEERING COMMITTEE CLIENT: G-8026 JOB NO: FROEHLING & ROBERTSON, INC. CONTRACTOR: PAGE NO: 1 of 2 **EQUIPMENT USED:** CME-55 ATV LOCATION: See Plan **ELEVATION:** CORE DEPTH TO: (ft.) **GROUND WATER** CASING SAMPLER DATE START: 1/18/90 BARRE BOTTOM | BOTTOM DATE FINISH: DATE HRS AFTER WATER TYPE s 1/18/90 HSA COMP OF CASING OF HOLE DRILLER: B. Maxwell 1/18/90 NE 3 1/4 in. 1 3/8 in .5 25.0 27.0 SIZE ID PREPARED BY: R. L. Burdine 140 lbs. HAMMER WT 30 in. HAMMER FALL CASING SAMPLER SAMPLE SAMPLE DEPTH BLOWS **BLOWS** NUMBER DEPTH FIELD CLASSIFICATION AND REMARKS PER FEET PER RANGE FOOT 6 INCHES -5.0 18 5.0 SANDY SILT (ML) **S1** 33 Medium dense to very dense, gray to tan, dry, mostly silt, 50/4 6.5 some fine sand, trace mica flakes. -SAPROLITE--10.0 50/5.5 10.0 S2 SANDY SILT (ML) 10.5 Medium dense to very dense, gray to tan, dry, mostly silt, some fine sand, trace mica flakes. -SAPROLITE--15.0 15.0 27 **S3** SANDY SILT (ML) 16.0 50/5 Medium dense to very dense, gray to tan, dry, mostly silt, some fine sand, trace mica flakes. -SAPROLITE-- 20.0 COMPONENT % GROUND WATER ABBREV. BLOWS/FT. DENSITY BLOWS/FT. CONSISTENCY SAMPLE ID. SPLIT SPOON MOSTLY 50 - 100% 0 - 2 VERY SOFT 0 - 4 **VERY LOOSE** WD - WHILE DRILLING SOME 30 - 45% LITTLE 15 - 25% TUBE NE - NOT ENCOUNTERED 5 - 10 LOOSE UNDISTURBED PISTON 11 - 30 31 - 50 MEDIUM DENSE MEDIUM STIFF 5 - 8 UR - NOT READ GRAB SAMPLE OTHER 9 - 15 FFW 5 - 10% STIFF DENSE TRACE VERY STIFF 51+ **VERY DENSE** 16 - 30 «5% BORING NO. SB8

NR NO RECOVERY

HARD

31+

ENVIRONMENTAL CONSULTANTS TEST BORING REPORT PAGE 2 OF

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE		FIELD CLASSIF	TCATION AND	REMARKS
		37	S4	20.0	SANDY S	SILT (ML)		
		50/3	34	21.0		dense to very dense	e, gray to tan, dr	y, mostly silt,
						sand, trace mica t	flakes	
			1				-\$	APROLITE-
			1			•		
			1					
			1					
			1					
		 	1		SANDY S	U T /RAL \		
			┨				aray to tan do	y, mostly silt, some
- 25.0		50/5	S5	25.0		trace mica flakes.	s, gray to tail, or	y, mostly siit, some
		20/2	133		ille sano,	trace mica nakes.	٠.	APROLITE-
				25.5				
1			₹			Bottom of Explo	oration at 25.0 f	t.
		 	┥	Į	ļ	·		
			1					
		 	┨		!			
			4	}				
			┨					
		<u> </u>	4					
-30.0			1					
		ļ	4		Note:	Tremie grouted b		
			ļ			surface with grou	ut / 3% bentonite	by weight
			_	j ,	ļ	mixture.		
1]					
]		l			
			1					
			1		ł			
			i					
			1					
-35.0			-	- '	•			
			-]				
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40.0			1	1	1			
40.0			1		1			
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		1	4		1			
- 1	1	L	1		1			
	ĺ	L]		I			
45.0	L	T	1 .	1	<u> </u>			
-45.0		<u> </u>				CAMPI E ID	CANDANEUT N	
-45.0 ILOWS	/FT. DE	NSITY [BLOWS/F	T. CON	SISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBRE
LOWS			BLOWS/F		SISTENCY ERY SOFT S	SAMPLE ID.	MOSTLY 50 - 100%	GROUND WATER ABBRE
LOWS	VERY L	.OOSE	0 - 2 3 - 4	VI SC	ERY SOFT S	SPLIT SPOON TUBE	MOSTLY 50 - 100% SOME 30 - 45%	WD - WHILE DRILLING NE - NOT ENCOUNTERED
LOWS	VERY L	OOSE	0 - 2	VI SK	ERY SOFT S	SPLIT SPOON	MOSTLY 50 - 100% SOME 30 - 45%	WD - WHILE DRILLING

SIRRINE **TEST BORING REPORT ENVIRONMENTAL** BORING NO. SB9 **CONSULTANTS** MEDLEY FARM RI/FS PHASE IB PROJECT: MEDLEY FARM STEERING COMMITTEE CLIENT: G-8026 JOB NO: FROEHLING & ROBERTSON, INC. CONTRACTOR: PAGE NO: 1 of 2 CME-55 ATV LOCATION: EQUIPMENT USED: See Plan ELEVATION: CORE GROUND WATER CASING DEPTH TO: (ft.) SAMPLER DATE START: 1/20/90 BARRE BOTTOM OF CASING BOTTOM OF HOLE HRS AFTE **DATE FINISH:** DATE WATER TYPE HSA S 1/20/90 COMP DRILLER: B. Maxwell NE 3 1/4 in. 1 3/8 in. 25.0 27.0 SIZE ID 1/20/90 .5 PREPARED BY: R. L. Burdine 140 lbs. HAMMER WT 30 in. HAMMER FALL CASING SAMPLER SAMPLE DEPTH SAMPLE DEPTH BLOWS BLOWS FIELD CLASSIFICATION AND REMARKS FEET PER 6 INCHES PFR RANGE FOOT -5.0 SILTY CLAY (CL) 5.0 3 Medium stiff, reddish-orange and tan, dry, mostly clay, 5 **S1** some silt. 6 7.0 9 -RESIDUAL SOIL--10.0 **CLAYEY SILT (ML)** 10.0 Loose, tan and gray, dry, mostly silt, some clay, trace S2 mica. 11 -SAPROLITE-12.0 _15.0 SILT (ML) 15.0 Loose to medium dense, gray to light brown, mostly silt, few 8 **S3** clay, few mica. 14 17.0 15 -SAPROLITE (Schist)-20.0

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
5 - 10 11 - 30	VERY LOOSE LOOSE MEDIUM DENSE		VERY SOFT SOFT MEDIUM STIFF	T TUBE U UNDISTURBED PISTON	MOSTLY 50 - 100% SOME 30 - 45% LITTLE 15 - 25% FEW 5 - 10%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
	DENSE VERY DENSE	9 - 15 16 - 30 31+	STIFF VERY STIFF HARD		TRACE <5%	BORING NO. SB9

ENVIRONMENTAL CONSULTANTS TEST BORING REPORT PAGE 2 OF 2

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE		FIELD CLASSIF	TCATION AND I	REMARKS
		11 10 11 14	S4	20.0 22.0		ML) to medium dense, gra w mica.		, mostly silt, few APROLITE (Schist)-
- 25.0		9 10 14	S5	25.0	SILT (N Loose t few mid	to medium dense, gra		mostly silt, few clay, APROLITE (Schist)
		16		27.0		Bottom of Expl		
-30.0					Note			
			1			surface with groumixture.	ot / 3% bentonite	r by weight
-35.0			† - -					
- 40.0			1					
			1 - - 1					
-45.0			1			,		
3LOWS 0 - 4 5 - 10 1 - 30	VERY L LOOSE MEDIUI	OOSE	0 - 2 3 - 4 5 - 8 9 - 15	VE SC Mi	ERY SOFT OFT EDIUM STIFF	SAMPLE ID. S SPLIT SPOON T TUBE U UNDISTURBED PISTON G GRAB SAMPLE	MOSTLY 50 - 100% SOME 30 - 45% LITTLE 15 - 25% FFW 5 - 10%	GROUND WATER ABBRI WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
1 - 50 1+	DENSE VERY D		16 - 30 31+	VE	RY STIFF	X OTHER NR NO RECOVERY	FEW 5 - 10% TRACE <5%	BORING NO. SB9

TEST BORING REPORT BORING NO. SB10 CONSULTANTS PROJECT: MEDLEY FARM RIFS PHASE IB MEDLEY FARM STEERING COMMITTEE CLIENT: G-8026 JOB NO: FROEHLING & ROBERTSON, INC. CONTRACTOR: PAGE NO: 1 of 2 CME-55 ATV EQUIPMENT USED: LOCATION: See Plan **ELEVATION:** CORE **GROUND WATER** SAMPLER DEPTH TO: (ft.) DATE START: 1/18/90 BARREI BOTTOM | BOTTOM HRS AFTE DATE FINISH: DATE WATER 1/18/90 TYPE S **HSA** OF CASING COMP DRILLER: B. Maxwell NE 1 3/8 ln. 1/18/90 .5 25.0 27.0 SIZE ID 3 1/4 in. PREPARED BY: R. L. Burdine 140 lbs. HAMMER WT 30 in. HAMMER FALL CASING BLOWS SAMPLER SAMPLE DEPTH BLOWS DEPTH NUMBER IN FEET FIELD CLASSIFICATION AND REMARKS PER FOOT 6 INCHES -5.0 SILTY CLAY (CL) 5.0 Stiff, orangish-red, dry, mostly clay, some silt. 9 S1 13 7.0 16 -RESIDUAL SOIL--10.0 10.0 5 S2 SILT (ML) 6 Loose, tan, dry, mostly silt, trace fine sand. 12.0 9 -SAPROLITE--15.0 SILT (ML) 15.0 Loose, tan, dry, mostly silt, trace fine sand. 6 **S3** 17.0 7 -SAPROLITE-

ſ	BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY		SAMPLE ID.	COMP	ONENT %	GROUND WATER ABBREV.
	5 - 10	VERY LOOSE LOOSE MEDIUM DENSE	0 - 2 3 - 4 5 - 8	VERY SOFT SOFT MEDIUM STIFF	STU	SPLIT SPOON TUBE UNDISTURBED PISTON	SOME	50 - 100% 30 - 45% 15 - 25%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ

BORING NO. SB10

11 - 30 MEDIUM DENSE 5 - 8 MEDIUM STIFF U UNDISTURBED PISTON UTTLE 15 - 25% G GRAB SAMPLE FEW 5 - 10% STIFF V OTHER TRACE <5% NR NO RECOVERY

20.0

SIRRINE _

CONSULTANTS

ENVIRONMENTAL TEST BORING REPORT

BORING NO. SB10

PAGE 2 OF

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE		FIELD CLASSIF	ICATION AND I	REMARKS
		5 10 15 13	S4	20.0 22.0		, dry, mostly silt, li e fine sand.	,	el and coarse APROLITE-
 25.0		18	S5	25.0 	SILT (ML) Loose, tan trace fine s	, dry, mostly silt, li	ittle quartz grave	el and coarse sand,
	·· -	21 30	<u> </u>	27.0			-\$	APROLITE-
						Bottom of Explo	oration at 27.0 f	t.
—30.0					Note:	Tremie grouted b surface with grou mixture.		
35.0								
— 40.0	_							
	·							
			-		·			
—45.0								
BLOWS	/FT. DE VERY L		BLOWS/F			SAMPLE ID.	MOSTLY 50 - 100%	GROUND WATER ABBREV
5 - 10 11 - 30 31 - 50 51+	LOOSE	M DENSE	3 · 4 5 · 8 9 - 15 16 - 30 31+	SK M S' Vi	OFT T U EDIUM STIFF G ERY STIFF X	TUBE UNDISTURBED PISTON GRAB SAMPLE OTHER NO RECOVERY	SOME 30 - 45% LITTLE 15 - 25% FEW 5 - 10% TRACE <5%	NE - NOT ENCOUNTERED UR - NOT READ BORING NO. SB10

SIRRINE **TEST BORING REPORT ENVIRONMENTAL** BORING NO. BW1 **CONSULTANTS** PROJECT: _ MEDLEY FARM RI/FS MEDLEY FARM STEERING COMMITTEE CLIENT: _ G-8026 JOB NO: **ENVIRONMENTAL DRILLING & SERVICES** CONTRACTOR: PAGE NO: 1 of 5 MOBILE DRILL B-57 LOCATION: EQUIPMENT USED: See Plan **ELEVATION:** CORE 688,65 **GROUND WATER** CASING DEPTH TO: (ft.) SAMPLER DATE START: 6/1/89 BARREL BOTTOM | BOTTOM OF CASING OF HOLE DATE FINISH: HRS AFTER DATE WATER **HSA** 6/14/89 COMP OF CASING D. G. Fitzpatrick DRILLER: 6/5/89 54.4 3 1/4 In. 1 3/8 in. 60.5 60.5 SIZE ID PREPARED BY: R. L. Burdine 55.75 140 lbs. 14 65.0 6/6/89 65.0 HAMMER WT 30 In. HAMMER FALL CASING BLOWS SAMPLER BLOWS SAMPLE SAMPLE DEPTH NUMBER DEPTH RANGE IN FEET FIELD CLASSIFICATION AND REMARKS PER FOOT PER 6 INCHES -5.0 5.0 **CLAYEY SILT (ML)** 3 Δ Soft, reddish-brown, dry, mostly silt, some clay, trace fine sand. S1 5 7 7.0 -RESIDUAL SOIL--10.0 10.0 SILT (ML) 2 Soft, tan, dry, mostly silt. S2 3 12.0 -SAPROLITE--15.0 15.0 SILT (ML) 7 **S3** Soft, tan, dry, mostly silt, trace mica. 17.0 -SAPROLITE-Note: Drilling is intermittently hard and soft.

BLOWS/FT	. DENSITY	BLOWS/FT.	CONSISTENCY			СОМР	ONENT %	GROUND WATER ABBREV.
0 - 4 5 - 10 11 - 30	VERY LOOSE LOOSE MEDIUM DENSE		VERY SOFT SOFT MEDIUM STIFF	STUG	SPLIT SPOON TUBE UNDISTURBED PISTON GRAB SAMPLE	MOSTLY SOME UTTLE FEW	50 - 100% 30 - 45% 15 - 25% 5 - 10%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
31 - 50 51+	DENSE VERY DENSE	9 - 15 16 - 30 31 -	STIFF VERY STIFF HARD	x	OTHER NO RECOVERY	TRACE	c5%	BORING NO. BW1

SIRRINE ____

ENVIRONMENTAL CONSULTANTS TEST BORING REPORT PAGE 2 OF 5

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE		FIELD CLASSIF	FICATION AND	REMARKS
-20.0		8	S4	20.0	<u>ŞILT (</u> Loose	ML) to medium dense, tar	n, dry, mostly silt	, trace fine sand.
		10	1	22.0		•	-9	SAPROLITE-
					1	Note:		
			1			Drilling became ve pressure it is takin		
- 25.0		7		25.0	SILT (<mark>ML)</mark> to medium dense, tan	dry maetly sitt	trace fine sand with
		11	S5	-		uartz gravel.	i, dry, mostry sit	, trace inte sano, with
		20	1	27.0	<u> </u> 		-9	SAPROLITE-
			1					
		 	-	:				
	-]					
-30.0		10		30.0	SILT (A E
	l 	12	S6			to medium dense, tan ace thin quartz veins a		
		1 <u>7</u>	_	32.0		. , , , , , , , , , , , , , , , , , , ,	_	SAPROLITE-
}		18		33.0	SILT (ML)		
		20	S7		Loose	to medium dense, tar		t, trace fine sand, with
		24 50/5 in.	1	35.0	trace t	hin quartz veins at va	rious angless	SAPROLITE-
-35.0		20		35.0	SILT	ML)		
		45 50/4	S8	-	Loose	to medium dense, ta		
		50/4		36.5	with tr	ace thin quartz veins	_	s. SAPROLITE-
- 1]				•	
1			j			Note: Extremely hard	material and dr	illing is very difficult.
}						Exacinety natu	a.c.iai dila di	ig to very airribuit.
- 40.0		24		40.0	<u>SIL</u> T	<u>(ML)</u>		
		45	S9			se, tan and gray, dry,	mostly silt, trace	fine sand.
		40 50/5 in.		42.0			-	ADDOLITE
		30/3 IA.					•9	SAPROLITE-
ł								
Į								
[
-45.0								
LOWS	FT. DEI	NSITY			SISTENCY	SAMPLE ID.		GROUND WATER ABBR
i - 10 LC 1 - 30 Mi 1 - 50 Di	VERY LOOSE 0 - 2 LOOSE 3 - 4 MEDIUM DENSE 5 - 8 DENSE 9 - 15	SC M	ERY SOFT OFT EDIUM STIFF TFF	S SPLIT SPOON T TUBE U UNDISTURBED PISTON G GRAB SAMPLE	MOSTLY 50 - 100% SOME 30 - 45% LITTLE 15 - 25% FEW 5 - 10%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ		
	VERY D	ENSE	16 - 30 31+	VE	RY STIFF	X OTHER NR NO RECOVERY	TRACE <5%	BORING NO. BW1

ENVIRONMENTAL CONSULTANTS TEST BORING REPORT PAGE 3 OF

ONSU	LTANTS	3		'	DOTTING TILPOTT PAGE 3 OF 5
DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	
-45.0		24	S10	45.0	POORLY GRADED SAND WITH SILT (SP-SM)
		50		46.0	Dense gray and tan, dry, mostly fine sand, few silt.
			<u> </u>		-SAPROLITE-
]		
		├	1		<u> </u>
] .		
]		
- 50.0		15		50.0	CLAYEY SILT WITH SAND (ML)
		15	S11	-	Medium dense, gray to tan, mostly silt, little clay, trace fine sand
		25] "''	52.0	trace mica.
		40		52.0	†
]		-SAPROLITE (SCHIST)-
ł		<u> </u>	∤		
ŀ			 		
-55.0			1		OLAVEY CH T WITH CAND AND
		18	∤	55.0	CLAYEY SILT WITH SAND (ML) Medium dense, gray to tan, mostly silt, little clay, trace fine sand
}		34 38	S12	_	trace mica.
1		50	1	57.0	
Ì					Note:
!		 		1	Static water level in borehole after 30 minutes was 54.4 ft. below ground surface. Augers and bottom of
			1		hole was at 60.0 ft.
Ī]		
-60.0		24		60.0	· · · · · · · · · · · · · · · · · · ·
		50/5 in.	S13	••	CLAYEY SILT WITH SAND (ML)
İ				61.0	Medium dense, gray to tan, mostly silt, little clay, trace fine sand trace mica.
}					-SAPROLITE (SCHIST)-
		 			- SAI NOETE (SONST)
]		
}					
.		<u> </u>			
- 65.0		6	S14	65.0	CLAYEY SILT WITH SAND (ML)
ļ		50/4.5	314	66.0	Medium dense, gray to tan, mostly silt, little clay, trace fine sand,
Ì					trace micaSAPROLITE (SCHIST)-
1					
}		<u> </u>			
1		ļ			
	· · ·				
-70.0					
LOWS	FT. DF	NSITY TE	LOWS/FT	CON	 ISISTENCY SAMPLE ID. COMPONENT % GROUND WATER ABBRE
- 4	VERY LOOSE	OOSE	0 - 2 3 - 4 5 - 8	VI SC	VERY SOFT S SPLIT SPOON MOSTLY 50 - 100% WD - WHILE DRILLING SOFT T TUBE SOME 30 - 45% NE - NOT ENCOUNTERED HARDIUM STIFF U UNDISTURBED PISTON LITTLE 15 - 25% UR - NOT READ
- 30 i - 50	DENSE	i	9 - 15 16 - 30	SI	TRACE 55% BORING NO. BW1
1+	VERY DENSE	ENSE	31+		AND NR NO RECOVERY BORING NO. BW1

CONSULTANTS TEST BORING REPORT PAGE 4 OF

CONSU	_TANTS			<u> </u>		111	MO IIL	<u> </u>	7111	PAGE 4	OF 5
DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	NUMBER	SAMPLE DEPTH RANGE			FIELD CLASSIF	ICATIO	ON AND	REMARKS	
— 70.0		50/5 in.	S15	70.0 70.5	Ver	y de	Y GRADED SANI nse, gray to tan, m w biotite.	D (SP) noist, mo	ostly fine	to medium sa	nd, little
									-SA	PROLITE-	
 75.0		50/5 in.	S16	75.0 -75.5			Y GRADED SANI		aath, fia a	to modium on	ad little
				3.3			nse, gray to tan, π w biotite	noist, mi		PROLITE	nd, little
80.0											
						•	Auger Refu	usal at 8	30.5 feet		
					Not	Note: Removed augers from borehole and set up to begin reaming the borehole with a 10 inch tri-cone roller bit. Tried to ream with water but had to switch to bentonite mud rotary.					
—-85.0 							Reamed boreho socket in compe stainless steel s and solid PVC c	etent be solid ca asing f	edrock. sing from rom 45.7	installed m 85.7 to 45.7 7 ft. to the	
							surface. The ca place with 3% b				ח
90.0											
		,									
— 95.0											
BLOWS/	FT. DEN	ISITY B	LOWS/FT	CON	SISTENCY		SAMPLE ID.	COMPC	NENT %	GROUND WAT	ER ABBREV.
0 - 4 5 - 10 11 - 30 31 - 50	VERY LO LOOSE MEDIUM DENSE	DENSE	0 - 2 3 - 4 5 - 8 9 - 15 16 - 30	SC Me St	ERY SOFT DET EDIUM STIFF TIFF ERY STIFF	T U G	SPLIT SPOON TUBE UNDISTURBED PISTON GRAB SAMPLE OTHER	SOME LITTLE FEW	50 - 100% 30 - 45% 15 - 25% 5 - 10%	WD - WHILE DRI NE - NOT ENCO UR - NOT READ	UNTERED
51+	VERY DE	מכח:	31+		ARD		NO RECOVERY	TRACE <5%		BORING NO.	

SIRRINE CORE BORING REPORT BORING NO. BW1 PAGE 5 OF 5

DEPTH	DRILL	CORE NO.	RECO	VERY			PIPI D AL LESS	510 A 52 C 44 C 42		
IN FEET	MIN. PER FOOT	DEPTH RANGE	FT.	*	ROD		FIELD CLASSI	FICATION AN	IU REMARK	.5
85				_		85.7				
	15:30	86.0		:			Continued from	-	. ,	
	10:15 11:45	C1	6.0	100%	30%	QUARTA tight, mo	ghtly weathered, ZO-FELDSPATH derately dipping very thin modera	IIC GNEISS; v , smooth joints	ery close to s; some appe	close, open to
90	13:55 16:00	· :				Note	·) - FE3		
	12:30	92.0				Be	egan loosing wa	ater rapidly w	hen we got	to 92.0 ft.
	10:30	92.0	2.0			QUARTZ	ghtly weathered, ZO-FELDSPATH derately dipping.	IIC GNEISS; v	ery close to	close, open to
95	5:20 9:00	C2 94.8	2.8	71%	0%	stained; Note	very thin modera : Continued loo to this we decid	ately dipping fo	oliation. apidly. (App	
							Bottom of Ex	ploration at	94.8 ft.	
Ī										
Ī										
100										
Ì										
ł		ı								
ł										
}										
	<u> </u>			}						
105										
FII	ELD HAI	RDNESS	3		BEDD	ING	DISCONTIN JOINT/SHEAR/F		WEA	THERING
HARD ARD OD, HA OFT			FFICULT	V. THI THIN MEDIL THICK	J M	42" 2" - 12" 12" - 36" 36" - 120"	V. CLOSE CLOSE MOD. CLOSE WIDE	<2" 2" - 12" 12" - 36" 36" - 120"	FRESH V. SLIGHT SLIGHT MODERATE	MOD. SEVERE SEVERE V. SEVERE COMPLETE
SOFT	- CAR			V. THI		»120"	V. WIDE	≽120"		

SIRRINE **ENVIRONMENTAL TEST BORING REPORT BORING NO. BW2 CONSULTANTS** MEDLEY FARM RI/FS PROJECT: **MEDLEY FARM STEERING COMMITTEE** CLIENT: JOB NO: G-8026 **ENVIRONMENTAL DRILLING & SERVICES** CONTRACTOR: PAGE NO: 1 of 4 **MOBILE DRILL B-57** EQUIPMENT USED: LOCATION: See Plan ELEVATION: 661.26 CORE **GROUND WATER** DEPTH TO: (fL) CASING SAMPLER **DATE START:** 7/25/89 BARREL BOTTOM | BOTTOM OF CASING OF HOLE HRS AFTER DATE FINISH: DATE WATER s 7/25/89 TYPE HSA COMP DRILLER: D. G. Fitzpatrick 1 3/8 ln. 7/25 WD NE 6 3/4 ln. 65.0 SIZE ID PREPARED BY: R. J. Hunt 140 lbs. HAMMER WT 30 ln. HAMMER FALL CASING BLOWS SAMPLER BLOWS DEPTH SAMPLE NUMBER SAMPLE DEPTH RANGE IN FEET FIELD CLASSIFICATION AND REMARKS 6 INCHES FOOT 4.0 SILTY CLAY (CL) 5 Medium stiff, reddish-orange, dry, mostly clay, little silt, trace -5.0 **S1** 6 muscovite. 6.0 7 -RESIDUAL SOIL-9.0 SILT (ML) Soft, reddish tan, dry, mostly silt, trace sand, trace muscovite. - 10.0 S₂ 4 11.0 5 -SAPROLITE-SILT WITH SAND (ML) 14.0 Soft, reddish tan, dry, mostly silt, little fine 3 _15.0 sand, trace clay, trace muscovite. **S3** 4 5 16.0 -SAPROLITE-19.0 **S4** 3 - 20.0 COMPONENT % GROUND WATER ABBREV. BLOWS/FT. DENSITY BLOWS/FT. CONSISTENCY SAMPLE ID. SPLIT SPOON MOSTLY 50 - 100% 0 - 2 VERY SOFT 0 - 4 VERY LOOSE WD - WHILE DRILLING SOME 3 - 4 5 - 8 SOFT MEDIUM STIFF TUBE 30 - 45% NE - NOT ENCOUNTERED UR - NOT READ 5 - 10 LOOSE UNDISTURBED PISTON UTTLE 15 - 25% 11 - 30 31 - 50 51+ MEDIUM DENSE G GRAB SAMPLE X OTHER NR NO RECOVERY 9 - 15 STIFF GRAB SAMPLE FFW 5 - 10% DENSE VERY STIFF TRACE VERY DENSE **<5%** 16 - 30 BORING NO. BW2 HARD

SIRRINE ____

ENVIRONMENTAL CONSULTANTS TEST BORING REPORT PAGE 2 OF

DEPTH IN FEET	BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE		FIELD CLASSIFICATION AND REMARKS				
20.0		3	S4	21.0	SII	T WITH SAND (ML)				
		4		21.0	So	ft, reddish tan, dry, mo	stly silt, little fine	sand, trace clay,		
			1		tra	ce muscovite.				
			-				-5	APROLITE-		
			1							
			1							
		3		24.0		T WITH SAND (ML)	at the Part C			
- 25.0		6	S5	-		π, reddish tan, dry, mo iscovite.	ostly sift, little fine	e sand, trace clay, trace		
		8	1	26.0						
							-S	APROLITE-		
1			1							
		3		29.0	SIL	T WITH SAND (ML)				
-30.0		4	S6	23.0	So	ft, reddish tan, dry, mo	stly silt, little fine	e sand, trace clay, trace		
		6		31.0	mu	scovite.				
1		-		31.0						
			1				-S	APROLITE-		
+		3		34.0	SII	T WITH SAND (ML)				
		5	67			dium stiff, tannish gra	y, mostly silt, littl	e fine sand, trace to		
		7	S7		few	muscovite, trace clay	, weakly foliated	(schistose).		
-35.0		9		36.0			-	(b)		
							-S	APROLITE-		
					SII	T WITH SAND (ML)				
		3		39.0	Me	dium stiff, tannish gray				
- 40.0		5	S8	-	few	muscovite, trace clay	, weakly foliated	(schistose).		
		8	1	41.0			-9.	APROLITE-		
							-5.	AT HOLHE		
					141					
					CII	T MITH CAMP (MI)				
		1		44.0		T WITH SAND (ML) dium stiff, tannish gra	v. mostly silt. littl	e fine sand, trace to few		
		8	S9	44.0		scovite, trace clay, we				
-45.0		9						APROLITE-		
BLOWS	FT. DEN	NSITY	BLOWS/F1	r. CON	SISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBRI		
0 - 4 5 - 10 1 - 30	VERY LO		0 - 2 3 - 4 5 - 8 9 - 15	S	ERY SOFT OFT EDIUM STIFF	S SPLIT SPOON T TUBE U UNDISTURBED PISTON G GRAB SAMPLE	MOSTLY 50 - 100% SOME 30 - 45% LITTLE 15 - 25% FEW 5 - 10%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ		
1 - 50	VERY DI	ENCE	16 - 30		RY STIFF	X OTHER NR NO RECOVERY	TRACE 45%	BORING NO. BW2		

ENVIRONMENTAL CONSULTANTS TEST BORING REPORT BORING NO. BW2 PAGE 3 OF 4

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE		FIELD CLASSIF	ICATION AND I	REMARKS
-45 .0		9 10	S9	 46.0				
			}					
			1					
			-					
_ 5 0.0		5 9 15	S10	49.0 	Med	WITH SAND (ML) ium stiff, tannish gray muscovite, trace clay,		
		19		51.0	 		_	SAPROLITE -
			}					OAI HOLHE
			‡					
		12	ļ	54.0		T WITH SAND (ML)		le fine sand trace to
-55.0		15 50/4.5	S11	56.0				re defined (schistose).
								0.4.00.01.175
			}				•	SAPROLITE -
-60.0		50/5 ln.	S12	59.0 59.5				
-00.0			}			Auger I	Refusal at 60.0	ft.
			}			Note:		
]			Removed augers begin reaming th	ne borehole witi	h a 10 inch
			_			tri-cone roller bit creating a 5 ft. s	ocket in compe	tent bedrock.
- 65.0			1			to 64.4 ft. and so	lid PVC casing	
			1			place with 3% be		essure grouted in t grout
			1					
			1					
		<u> </u>	1					
-70.0			1					
LOWS	/FT. DE	 NSITY] BLOWS/F	T. CON	SISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBR
) - 4 5 - 10 1 - 30	VERY LO		0 - 2 3 - 4 5 - 8	S4 M	ERY SOFT OFT EDIUM STIFF	S SPLIT SPOON T TUBE U UNDISTURBED PISTON	MOSTLY 50 - 100% SOME 30 - 45% LITTLE 15 - 25%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
1 - 50 1+	DENSE VERY D		9 - 15 16 - 30 31+	VI	TIFF ERY STIFF ARD	G GRAB SAMPLE X OTHER NR NO RECOVERY	FEW 5 - 10% TRACE <5%	BORING NO. BW2

SIRRINE CORE BORING REPORT BORING NO. BW2 PAGE 4 OF 4

4 OF 4

DEPTH	DRILL RATE	CORE NO.	RECO	VERY						
IN FEET	MIN. PER FOOT	DEPTH RANGE	FT.	*	RQD		FIELD CLASSI	FICATION AN	ID REMARKS	
						65.0				
-65	9:00	65.0					(Continued f	rom Test Bor	ing Report)	
	5:00					and bro	wn (oxidized), m	edium-grained		
	7:00	C1	2.4	48%		predom		ly dipping to s	steep, rough, open	
	10:00		5.0				ery thin, steep fo oxidized	iliation; joint si	urfaces generally	
- 70	11:00	70.0 70.0								
	11:30						n hard, moderate wn (oxidized), m		eathered, olive gray	
	12:00		4.1			GNEIS	S, very closely sp	paced (2 to 4 i	nches), predominantly	
	6:00	C2	5.0	82%		steep fo		aces generally	pen joints; very thin, heavily oxidized,	
	10:00									
75	12:00	75.0								
	31:00	75.0					n hard, moderate wn (oxidized), m		eathered, olive gray	
ļ	13:00		3.6			GNEIS:	S, very closely sp	aced (2 to 4 i	nches), predominantly	
	16:00	СЗ	5.0	73%		steep fo	oliation; joint surfa	aces generally	pen joints; very thin, heavily oxidized,	
	10:00					except	quartz and pyrite	present.		
_	14:00	80.0								
-80	24:00	80.0								
	12:00						n hard, moderate wn (oxidized), m		eathered, olive gray SCHISTOSE	
	19:00	C4	2.6	53%		GNEIS	S, very closely sp	aced (2 to 4 i		
	14:00		5.0			joints; v		liation; joint st	urfaces generally	
	12:00	85.0				_	·			
85							Bottom of Exp	loration at 85	5.0 ft.	
FII	ELD HA	RDNESS	.		BEDD	DING	DISCONTIN		WEATHERING	
					JOINT/SHEAR/F	RACTURE				
V. HARD - KNIFE CAN'T SCRATCH HARD - SCRATCHES DIFFICULT MOD. HARD - SCRATCHES EASILY SOFT - GROOVES THICK V. SOFT - CARVES V. THICK			1 ₩	<2" 2" - 12" 12" - 36" 36" - 120"	V. CLOSE CLOSE MOD. CLOSE WIDE	<2" 2" - 12" 12" - 36" 36" - 120"	FRESH MOD. SEVERE V. SLIGHT SEVERE SLIGHT V. SEVERE MODERATE COMPLETE			
V. SOFT - CARVES				V. 1HI	CK	»120°	V. WIDE	>120"	BORING NO. BW2	

BORING NO.

ENVIRONMENTAL TEST BORING REPORT BORING NO. BW3

CONSU	LIANIS	<u> </u>										
PROJE			ARM RI/F								· · · · · · · · · · · · · · · · · · ·	
CLIENT	r: <u> </u>				OMMITTEE				JOB N	0:	G-8026	
	RACTOR				DRILLING &	SERVICES			PAGE NO: 1 of 3			
EQUIP	MENT U	SED: _	MOBILE	DRILL B-	57		<u>-</u> -		LOCAT		See Plan	
GROUN	WATER		DEPTH TO	; (ft.)	ł	CASING	SAMPLER	CORE	ELEVA	TION: START:	573.44	
DATE	HRS AFTER	WATER	BOTTOM	BOTTOM	TYPE	HSA	S	BARREL	1	FINISH:	7/14/89 7/21/89	
	COMP		OF CASING	OF HOLE					DRILLI	ER:	D. G. Fitzpatrick	
7/14/89	WD	6.4	10.0	10.0	SIZE ID	3 1/4 ln.	1 3/8 ln.	2 1/4 In	PREPA	RED BY:	R. L. Burdine	
					HAMMER WT		140 lbs.					
	CASING	SAMPLER	Janes 5	SAMPLE	HAMMER FALL		30 in.					
DEPTH	BLOWS	BLOWS	SAMPLE NUMBER	DEPTH		מבוח	CLASSII	TC ATIO	N AND	DEMAD	Ke	
FEET	PER FOOT	PER 6 INCHES	: [RANGE		· ILLD	OEA3311	ICATIO	וז אוט	NEWAN	N.S	
			 	 								
1			7									
1]	i								
			4									
			4									
1 1			4	1 :								
1 1			4	1								
1 1			4									
—5.0		9	+	5.0	*****	004555	0445					
ŀ		9	٦.		WELL	GRADED h-brown to	SAND (S	provin	maist -	mantly fin	o cand to	
<u> </u>		5	_ S1	-	neudis	trace clay	DIACKIST	DIOWII,	nioist, f	HOSHY HIT	e sanu io	
1 1		4	7	7.0	gravo.,	ii add diay	•					
1 1			1						-9	SAPROLI	TE (Schist)-	
] [7									
1 1			7									
1 [
1												
L10.0				ļ								
1		4	4	10.0	SILT (I	<u>ML)</u> :b.browo.to	Aray m	oict mor	tly cit	little elev	, trace mica.	
1 1		5	⊣ S2	-	neddis	in-orowin to	gray, III	JISI, 1110S	try Sitt,	intie Clay,	, trace mica.	
		11	\dashv	12.0					-S∆	PROLITE	E (Mica Schist)-	
		14	4	12.0							_ (
1			-{	1								
1 1			-									
l l			-									
	· · · · · · · ·		┨									
l l			1									
15.0		4	+	15.0	SILT (I							
]]		50	- S3	16.0	Reddis	h-brown to	gray, mo	oist, mos	tly silt,	little clay,	, trace	
				1	mica.							
] [-SAPF	ROLITE (I	Mica Schist)-	
<u> </u>			_							, _ ,	= - ,	
[_									
			4	1 1								
l i	1		4	[
20.0			_									
				لــــا								
BLOWS	FT. DE	NSITY	BLOWS/F		SISTENCY	SAMPLI		COMPON		GROUNE	WATER ABBREV.	
0 - 4 5 - 10	VERY L		0 - 2 3 - 4	VE!	RY SOFT S		N N	MOSTLY 5	0 - 100% 0 - 45%		ILE DRILLING T ENCOUNTERED	
11 - 30	MEDIUI	M DENSE	5 - 8	ME	DIUM STIFF U	UNDISTURB		LITTLE 1	5 - 25% 5 - 10%	UR - NO		
31 - 50 51+	DENSE VERY D		9 - 15 16 - 30		RY STIFF X	OTHER			5 - 10% :5%	BORING	NO. BW3	
L			31+	HA!	RD N	R NO RECOVE	нт				· · · · · · · · · · · · · · · · · · ·	

SIRRINE ____

ENVIRONMENTAL CONSULTANTS TEST BORING REPORT PAGE 2 OF

OEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE		FIELD CLASSIF	FICATION AND	REMARKS
20.0		4 28 50/5 in.	S4	20.0 21.0	<u>ŞIL</u> Bro	T WITH SAND (ML)	little fine sand, I	ittle fine phlogopite
					liar	es.	-s	APROLITE-
25.0		16 50	S 5	25.0 26.0		T WITH SAND (ML) wn, moist, mostly silt, es.	little fine sand, li	ttle fine phiogopite
							-S	APROLITE-
-30.0		18 50/5 in.	S6	30.0 31.0	N	o Recovery, just slou	ugh.	
						·		
— 35.0		50	S 7	35.0		T WITH SAND (ML) own, moist, mostly silt,	little fine sand, l	ittle fine phlogopite flakes.
						Auger Refusal at 35.0) ft.	-SAPROLITE-
					Ma	.		
40.0					No		stalled 4 inch s	
				; 		grout and 3% bento set up for 48 hrs. be	nite by weight.	
	-							
 45.0								
BLOWS	FT. DE	ISITY B	LOWS/F1		SISTENCY	SAMPLE ID.		GROUND WATER ABBREV.
0 - 4 5 - 10 11 - 30 31 - 50	VERY LO LOOSE MEDIUN DENSE	DENSE	0 - 2 3 - 4 5 - 8 9 - 15 16 - 30	SC Me St	ERY SOFT DET EDIUM STIFF TEF ERY STIFF	S SPLIT SPOON T TUBE U UNDISTURBED PISTON G GRAB SAMPLE X OTHER	MOSTLY 50 - 100% SOME 30 - 45% LITTLE 15 - 25% FEW 5 - 10% TRACE <5%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
51+	VERY DI	ENSE	31+		ARD	NR NO RECOVERY		BORING NO. BW3

ENVIRONMENTAL CONSULTANTS CORE BORING REPORT BORING NO. BW3 PAGE 3 OF 3

CONS	ULTA				,				AGE 3	OF 3
DEPTH	DRILL	NO.	RECO	VERY	1	[FIELD OF ACCIEN	OATION AS	ID DC## C+	
IN FEET	MIN. PER FOOT	DEPTH RANGE	FT.	%	ROD		FIELD CLASSIFIC	CATION AN	ID HEMARK	S ——————
			1							
		}	1	İ	}	ł				
]		•			
			<u> </u>		<u> </u>	35.0				
—35	20:00	35.0					(Continued fron	n Test Borii	ng Report)	
	14:40		1				sh, gray, fine to me			
							, close to moderate ely dipping, rough jo			
	13:17	C1	3.0	83%	73	foliation.	.,		,	-7 -73
	19:24		3.0			ŀ				
40	18:20	38.0]_					
- 40	20:00	38.0				01	ah amas P- +-	الماد الماد		AMBURDOLE
					1		sh, gray, fine to me close to moderate			
	23:50	C2	4.9	98%	95		ely dipping, rough jo			
	25:00	02	5.0	30%			-			
	17:42									
45	24:00	43.0			ļ					
	22:00	43.0	ļ		1					
	20:00									
		~~	6.5	000/	00		sh, gray, fine to me close to moderate			
	20:00	СЗ	7.0	93%	93	moderate	ely dipping, rough jo			
	20:00				<u> </u>	foliation.				
— 50	20:00	50,0								
	26:00	50.0								
	20:00						sh, gray, fine to me			
	21:00	C4	4.9	98%	98		close to moderate ely dipping, rough jo			
		U 4	5.0	00/0		foliation.	, ,, 5, 5, 1,	, ,		, ., ,
	21:00	į								
	21:00	55.0								i
— 55							Bottom of Explor	ation at 55.	0 ft.	
	ELD UA	DNESS			0555	EDDING DISCONTINUITIES WEATHERING				
<u>-</u>	ELD HAI	יייים				JING	JOINT/SHEAR/FR		WEA	INERING
V. HARD		E CAN'T S		v. TH						MOD. SEVERE
HARD - SCRATCHES DIFFICULT MOD. HARD - SCRATCHES EASILY SOFT - GROOVES			THIN MEDI THICI	U M	2" - 12" 12" - 36" 36" - 120"	MOD. CLOSE	2" - 12" 12" - 36" 6" - 120"	V. SLIGHT SLIGHT MODERATE	SEVERE V. SEVERE COMPLETE	
V. SOFT - CARVES				V. TH		>120"		120"	BORING NO	

SIRRINE **TEST BORING REPORT** BORING NO. BW4 **CONSULTANTS** PROJECT: MEDLEY FARM RI/FS MEDLEY FARM STEERING COMMITTEE CLIENT: G-8026 JOB NO: **ENVIRONMENTAL DRILLING & SERVICES** CONTRACTOR: PAGE NO: 1 of 2 MOBILE DRILL B-57 LOCATION: EQUIPMENT USED: See Plan **ELEVATION:** 562.65 CORE **GROUND WATER** CASING SAMPLER DEPTH TO: (ft.) **DATE START:** 7/13/89 BARRE BOTTOM OF CASING HRS AFTE ROTTOM **DATE FINISH:** WATER 7/19/89 TYPE HSA COMP OF HOLE DRILLER: D. G. Fitzpatrick 7/14/89 WD 4.2 10.0 10.0 SIZE ID 3 1/4 in. 3/8 in. 2 1/4 in PREPARED BY: R. L. Burdine 7/20/89 24 4.0 18.0 31.0 HAMMER WT 140 lbs. HAMMER FALL 30 in. CASING SAMPLER SAMDI F DEPTH SAMPI F BLOWS NUMBER DEPTH IN FEET FIELD CLASSIFICATION AND REMARKS PFR RANGE FOOT 6 INCHES **WELL GRADED SAND (SW)** -5.0 Gray, moist, mostly fine to very coarse sand, some gravel. 5.0 5 31 -ALLUVIUM-S1 44 7.0 SANDY SILT (ML) 49 Dense, gray, moist, mostly silt, some fine sand, trace muscovite. phlogopite, pyrite. -SAPROLITE-_10.0 SANDY SILT (ML) 30/3 in. 10.0 S2 Dense, gray, moist, mostly silt, some fine sand, trace 10.2 muscovite, phlogopite, pyrite. -SAPROLITE-Auger Refusal at 13.1 ft. Note: -15.0 Advanced with 10 inch tri-cone roller bit to 18.0 ft. and installed 4 inch stainless steel casing. Pressure grouted casing with neat cement grout and 3% bentonite by weight. Grout allowed to set-up for 5 days before coring. 20.0

BLOWS/FT	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
5 - 10	VERY LOOSE LOOSE MEDIUM DENSE DENSE	0 - 2 3 - 4 5 - 8 9 - 15	VERY SOFT SOFT MEDIUM STIFF STIFF	S SPLIT SPOON T TUBE U UNDISTURBED PISTON G GRAB SAMPLE	MOSTLY 50 - 100% SOME 30 - 45% LITTLE 15 - 25% FEW 5 - 10%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
	VERY DENSE	16 - 30 31+	VERY STIFF	X OTHER NR NO RECOVERY	TRACE 45%	BORING NO. BW4

BW4 BORING NO. **CORE BORING REPORT** PAGE OF **CONSULTANTS** DRILL RECOVERY DEPTH RATE FIELD CLASSIFICATION AND REMARKS DEPTH RANGE RQD MIN. PER FOOT FEET 18.0 18.0 (Continued from Test Boring Report) 4:40 20 4:20 Hard to moderately hard, slightly to moderately weatherd, gray 36% O C1 to grayish tan, fine to medium-grained QUARTZ-AMPHIBOLE GNEISS, very closely spaced, open, moderately dipping, rough, 4:09 open joints; very thin, moderately dipping foliation. 5:22 22.8 8:16 22.8 10:10 - 25 Hard to moderately hard, slightly to moderately weatherd, gray 4:10 to grayish tan, fine to medium-grained QUARTZ-AMPHIBOLE C2 36% GNEISS, very closely spaced, open, moderately dipping, rough, 0 5.0 8:00 open joints; very thin, moderately dipping foliation. 4:30 27.9 5:17 27.9 10:30 - 30 No Recovery C3 0 0% 7:30 3.0 7:30 31.0 Bottom of Exploration at 31.0 ft. - 35

FIELD HARDNESS	BEDDING	DISCONTINUITIES JOINT/SHEAR/FRACTURE	WEATHERING		
V. HARD - KNIFE CAN'T SCRATCH HARD - SCRATCHES DIFFICULT MOD. HARD - SCRATCHES EASILY SOFT - GROOVES V. SOFT - CARVES	V. THIN 42" THIN 2" - 12" MEDIUM 12" - 36" THICK 36" - 120" V. THICK > 120"	V. CLOSE	FRESH MOD. SEVERE V. SUGHT SEVERE SUGHT V. SEVERE MODERATE COMPLETE		
, on the same of t			BORING NO. BW4		



CLIENT:

TYPE

ın

DEPTH

FEET

90.0

95.0

400.0

105.0

V. HARD

SOFT

V. SOFT

HARD MOD. HARD

RATE

4.5

9.0

2.0

5.0

3.0

3.0

5.5

5.0

4.0

3.0

4.0

1.5

2.5

6.0

6.5

5.5

- CARVES

V. THICK

CORE BORING REPORT BW105 BORING NO. _ MEDLEY FARM RUFS PHASE II JOB NO: G-8026 PROJECT: _ MEDLEY FARM PRP STEERING COMMITTEE PAGE NO: 1 of 3 CONTRACTOR: ATLANTA TESTING AND ENGINEERING LOCATION: See Plan CME-550 ATV EQUIPMENT USED: . ELEVATION: 669.37 ORIENTATION **CORE BARREL** 9/14/90 DATE START: VERTICAL DATE FINISH: 9/17/90 X **HQ Triple Tube** INCLINED DRILLER: P. Bergman BEARING ~ 2.0 ln. HORIZONTAL PREPARED BY: J.A Harrigan ANGLE FROM VERTICAL CORE RECOVERY RQD DEPTH FIELD CLASSIFICATION AND REMARKS MIN. PER FT. * RANGE Note: Due to the close proximity to boring SW4 (within 30 ft.) the split-spoon samples taken from that boring are representative for this location. For this reason this borehole was drilled by using a 10 inch roller bit and mud rotary From the surface to ~ 70 ft. the borehole was advanced through saprolite and from ~ 70 ft. to 84 ft. the transition zone was encountered. From 84 ft. to 89 ft. a five foot socket was drilled into the competent bedrock. A total of 50 ft. of 4 inch stainless steel and 40 ft. of PVC casing was pressure grouted in place in preparation to core the bedrock. 89.0 ft. .66 Moderately hard, slightly weathered, red brown, medium grained, C1 67 0 1.0 QUARTZ-MICA SCHIST; very close, tight to open moderately 90.0 dipping joints & fractures; dark brown (manganese?) stainings on fracture faces. 3.33, Hard, slightly weathered, moderate to extreme fracturing, red C2 0 67 **5**.0 brown, medium grained, QUARTZ-MICA SCHIST; very close to close, tight to open and healed, moderate to steeply dipping joints and fractures, green (epidote?) and dark brown (manganese?) coatings on fracture and joint surfaces. 95.0 95.0 Hard, slightly weathered, moderate to extreme fracturing, red brown, medium grained, QUARTZ-MICA SCHIST; very close to close, tight to open and healed, moderate to steeply dipping joints and fractures, green (epidote?) and dark brown (manganese?) СЗ 83 0 coatings on fracture and joint surfaces. 100.3 100.3 Hard, slightly weathered, moderate to extreme fracturing, red brown, medium grained, QUARTZ-MICA SCHIST; very close to 2.83 close, tight to open and healed, moderate to steeply dipping joints 41 0 C4 and fractures, green (epidote?) and dark brown (manganese?) 6.20 coatings on fracture and joint surfaces. **FIELD HARDNESS** BEDDING DISCONTINUITIES WEATHERING JOINT/SHEAR/FRACTURE KNIFE CAN'T SCRATCH V. THIN V. CLOSE FRESH MOD. SEVERE V. SLIGHT - SCRATCHES DIFFICULT THIN MEDIUM 2" - 12" CLOSE SEVERE V. SEVERE 12" - 36" 36" - 120' - SCRATCHES EASILY MOD. CLOSE MODERATE - GROOVES THICK WIDE COMPLETE

V. WIDE

×120

BORING NO.

BW105

FIELD CLASSIFICATION AND REMARKS FIELD CLASSIFICATION AND REMARKS FIELD CLASSIFICATION AND REMARKS FIELD CLASSIFICATION AND REMARKS Same as above with healed clataclastic zone-red brown bedrock with green matrix. Hard, very slightly weathered, red brown, medium grained, OUARTZ-MICA SCHIST; very close to close, tight to open and healed fractures; moderate to steeply dipping joints; very thin cliation; completely or partially quartz filled openings; green (epidote?) and dark brown (manganese?) coating on fractures and joints. Hard, very slightly weathered, red brown to greenish brown, medium grained, OUARTZ-MICA SCHIST; very close to close, tight to open and healed fractures, moderate to steeply dipping joints; very thin foliation; completely or partially quartz filled openings; green (epidote?) and dark brown (manganese?) coating on fractures and joints. Hard, very slightly weathered, greenish red-brown to blue gray, medium grained, OUARTZ-MICA SCHIST to OUARTZ-TIE SCHIST; very close, tight, steep to vertical dipping joints and fractures, very thin foliation; completely or partially quartz filled voids; green (epidote?) and dark brown (manganese?) coating on fractures points. Hard, very slightly weathered, greenish red-brown to blue gray, medium grained, OUARTZ-MICA SCHIST to OUARTZ-TIE SCHIST; very close, tight, steep to vertical dipping joints and fractures, very thin foliation; coccasional full or partially quartz filled voids; green (epidote?) and dark brown (manganese?) coating on fractures points. FIELD CLASSIFICATION AND FRACTION AND FRA	DEPTH	DRILL	CORE NO.	RECO	VERY						
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SIRRINE ______BORING REPORT BORING REPORT PAGE

DEPTH	DRILL											
IN FEET	RATE MIN. PER FOOT	DEPTH RANGE	FT.	*	RQD		FIELD CLASSI	IFICATION AN	ID REMARK	s		
-130		TOTAL .					-					
	1.3	130.0										
	1.3											
	1.5						ightly weathered					
	3.2	C8	9.67	106	91	SCHIST; vei	ned, QUARTZ-I y close, tight, st ry thin folation; (leep to vertical	dipping joints	s and		
-135	3.2		9.10		91	filled voids; (ry triin rolation, t preen (epidote?) actures joints.					
	3.3					wating on ir	actures juiitis.					
	3.6											
	4.5	139.1										
	7.5		 				····	· .				
-140							Bottom of E	xpioration at	139.1 ft.			
						Note: Upon receiving analytical results for discrete interval samples						
						taken in the corehole it was decided that due to the decreasing concentrations of residual chemicals with depth that the lower 30 ft.						
						ft. with a bei	routed. The corntonite seal from	n 114.38 to 11	2.18 ft. Then	a 2.0 inch		
-145							vell was installe nstallation Detai		see the Grou	nd Water		
		:										
-150								•				
										;		
E	ELD HAI	PUNECE			BEDI	NING	DISCONTIN	HITTER	WEAT	HERING		
	LLV IVA	LUNES				/11 / 2	JOINT/SHEAR/		WEAT	. IEUING		
V. HARD HARD MOD. HA SOFT V. SOFT	- SCR/ NRD - SCR/ - GRO	OVES	FFICULT	V. TH THIN MEDI THIC V. TH	UM K	df' 2° - 12° 12° - 36° 36° - 120° >120°	V. CLOSE CLOSE MOD. CLOSE WIDE V. WIDE	42" 2" - 12" 12" - 36" 36" - 120" >120"	FRESH V. SLIGHT SLIGHT MODERATE	MOD. SEVERE SEVERE V. SEVERE COMPLETE		
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CORE BORING REPORT

BW106

BORING NO. G-8026 MEDLEY FARMS RI PHASE II JOB NO: PROJECT: _ MEDLEY FARMS STEERING COMMITTEE PAGE NO: 1 of 2 CONTRACTOR: ATLANTA TESTING AND ENGINEERING LOCATION: See Plan **CME 75 EQUIPMENT USED:** 592.51 ELEVATION: CORE BARREL ORIENTATION DATE START: 9/24/90 DATE FINISH: X **VERTICAL** 9/27/90 INCLINED TYPE **HQ Triple Tube** DRILLER: P. Bergman BEARING ~ 2.0 in. HORIZONTAL PREPARED BY: J. Gillespie ID ANGLE FROM VERTICAL DEPTH CORE RECOVERY RATE 900 DEPTH FIELD CLASSIFICATION AND REMARKS MIN. PER FEET FOOT RANGE 54.75 ft. 54.75 3.2 Hard, very slightly weathered, light gray, medium grained, 64 0 C1 QUARTZ FELDSPATHIC SCHIST; hard milky white quartz layer in upper 2-3 inches. 5.0 59.75 6.5 59.75 1.0 Hard, very slightly weathered, light gray, medium-coarse grained 60 C2 50 100 QUARTZ FELDSPATHIC SCHIST; phyllitic sheen; close fractures. 60.75 1.0 moderately dipping foliation. 60.75 1.7 Hard, very slightly weathered, light gray, medium to coarse grained 6.3 C3 100 59 QUARTZ FELDSPATHIC SCHIST; phyllitic sheen; fractures are 1.7 62.45 close to very close, moderate to steeply dipping foliation; smooth 6.5 62.45 breaks parallel to foliation. Note: Zones of muddy water return & loss circulation during drilling 2.9 12.3 **C4** also light purple return water. 59 16 -65 4.9 4 67.53 67.53 2.5 Moderately hard, moderately to very slightly weathered, light blue C5 100 0 gray, coarse grain, QUARTZ FELDSPATHIC SCHIST; very close to 2.5 17.5 close fractures; breaks along plane of schistosity or foliation; shallow 69.86 to moderately dipping, foliation; smoky gray quartz lenses, 16.3 69.86 garnetiferous, phyllonitic? -70 Moderately hard, slight to very slightly weathered, light gray. 4.00 coarse grain, QUARTZ FELDSPATHIC SCHIST: very close 8 **C6** 93 0 fractures; parting cleanly along schistosity or foliation planes, few 4.29 cross cutting iron stained fractures, zones of garnets, crenulation 5.3 phyllonitic? 8.2 74.15 h.9 74.15 See page 2 for Run #7. 4.40 78.55 **FIELD HARDNESS** BEDDING DISCONTINUITIES WEATHERING JOINT/SHEAR/FRACTURE V. HARD KNIFE CAN'T SCRATCH V. THIN V. CLOSE FRESH MOD. SEVERE 2" - 12" 12" - 36" THIN MEDIUM 2" - 12" 12" - 36" V. SLIGHT SLIGHT SEVERE V. SEVERE HARD **SCRATCHES DIFFICULT** CLOSE MOD. HARD - SCRATCHES EASILY MOD. CLOSE SOFT GROOVES THICK WIDE 36" - 120" MODERATE - CARVES V. THICK V. WIDE V ROFT BORING NO. **BW112**

SIRRINE _______BORING REPORT BORING NO. BW106 PAGE 2 OF 2

DEPTH DRILL CORE REC				VERY					
IN FEET	RATE MIN. PER FOOT		FT.	*	RQD		FIELD CLASSI	FICATION AN	ID REMARKS
	6.67	74.15					hard, moderate		
	4.12	C7	2.4	54	o	fractures,		ctures and par	ITE SCHIST; very close, ting along foliation, acture.
	7.72		***				7 6 - F - F - 6	.,	
	9	78.55 78.55	1.9						ight, light gray, coarse
	6.73	C8		93	49				ST; close fractures ess cutting 90° and obligue
-80	6.73	80.60	2.05				res; parting alo		oo oottiing oo and obligat
		33.33					Bottom of	Exploration	at 80.60 ft.
								•	
•		ĺ							
	- · -								
_85									
-90									
- 95									
-100					L				
FI	ELD HAI	RDNESS	;		BEDD	NNG	DISCONTIN JOINT/SHEAR/F		WEATHERING
SOFT	IARD - SCRATCHES DIFFICULT IOD, HARD - SCRATCHES EASILY		V. THIN THIN MEDIUM THICK V. THICK		<2" 2" - 12" 12" - 36" 36" - 120" >120"	V. CLOSE CLOSE MOD. CLOSE WIDE V. WIDE	<2" 2" - 12" 12" - 36" 36" - 120" >120"	FRESH MOD. SEVERE V. SLIGHT SEVERE SLIGHT V. SEVERE MODERATE COMPLETE	
7. 30. 1 - VARYES									BORING NO. BW106
				L					

SIRRINE CORE BORING REPORT BORING NO. BW108

PNU	JECT: _	MEN	ET FA	KM KVI	S PH	ASE II			JOB NO:	G-8026
CLIE	NT:					ERING COMMI			PAGE NO:	1 of 2
				A TEST E-550 /	ING A	AND ENGINEER	ING		LOCATION: _	See Plan
EGUI	PMENT	ORE B		000 /	<u> </u>		DRIENTATION		ELEVATION: _ DATE START:	9/14/90
	 ``		Triple	Tubo		X VERTICAL	INCLINED		DATE START: DATE FINISH:	9/17/90
TYPE	 			1000			BEARING	b	DRILLER:	K. Warren
ID		~ 2.0	in.			HORIZONTAL	ANGLE FROM VE	ERTICAL	PREPARED BY	
DEPTH IN PEET	DRILL RATE MIN. PER FOOT	CORE NO. DEPTH RANGE	RECO	VERY %	RQD		FIELD CLAS	SIFICATION A	ND REMARK	S
						taken from that was drilled by u borehole was a encountered. F		tative for this location bit and mud rotary. prolite and from ~ 4 five foot socket was	on. For this reason From the surface 0 ft. to 68 ft. the tra s drilled into the con ssure grouted in pla	n this borehole to ~ 40 ft. the ansition zone was mpetent bedrock.
		73.8 C1 74.8	0.9	90.0	50	(See C2)				
-75.0		74.8 C2	2.9	82.9	19	QUARTZO- to steeply d	hard, slightly w FELDSPATHIC ipping fractures bundant musco	SCHIST; close; very thin horiz	e to very close zontal to steep	e, horizontal oly dipping
		- 0 -	3.5			present. Ph	nyllitic in texture ensitional to gne	/appearance in		
		78.3			<u> </u>	-i ``				
		78.3				(Same as C Note: Fract	2) ures and some	foliations heale	ed with green :	mineral
-80.0	5.0	cs	4.94	98.8	42	(epidote?).	Very small gari partings (related	nets and green	mineral most	prevalent
	7.0		5.0							
		83.3								
	-	83.3				_				
	3.25									
- 85.0	3.0	64	5.0	100	60	QUARTZÓ-	hard, slightly w FELDSPATHIC ipping fractures	SCHIST; clos	e to very close	e, horizontal
	3.5	C4	5.0			foliation. At present. Pr	oundant musco hyllitic in texture	vite and gamet /appearance in	. Healed fract	ures
l	3.5					appears trai	nsitional to gne	ISS.		
	4.0	88.3 88.3			_					
-90.0	2.5									
	ELD HAI	RDNESS			RF	DDING	DISCONTI	NUITIES	WEATH	IERING
							JOINT/SHEAR			
V. HARD - KNIFE CAN'T SCRATCH V. THIN <2"							V. CLOSE CLOSE MOD. CLOSE WIDE V. WIDE	<2" 2" - 12" 12" - 36" 36" - 120" >120"	SLIGHT	MOD. SEVERE SEVERE V. SEVERE COMPLETE



DEPTH	DRILL	CORE NO.	RECO	VERY		-	FIELD CLASSIFICATION AND REMARKS			
IN FREET	MIN. PER POOT		FT.	%	RQD		HELD CLASSI	IFICATION A	NU HEMARK	······································
	3.7					Moderately	hard, slightly we	eathered, gray	, medium-grai	ned,
	3.8	C5	5.3	100	58.5	to steeply d	FELDSPATHIC ipping fractures;	very thin hori	zontal to stee	ply dipping
	4.5		5.3			present. Pl	oundant muscov hyllitic in texture	/appearance is		
	4.5	93.6				appears tra	nsitional to gnei	ss. 		
- 9 5							Bottom of Ex	ploration at 9	13.9 ft.	
– 100										
	-									
	-									
– 105										
					-					
- 110		ľ								
						:				
						!				
		1								
- 115		1								
FI	ELD HA	RDNESS			BED	D MK	DISCONTIN JOINT/SHEAR/		WEAT	HERING
SOFT	- SCR LRD - SCR - GRC	E CANT S ATCHES D ATCHES E NOVES	IFFICULT	V. TH THIN MEDI THIC	IUM K	<2" 2" • 12" 12" • 36" 36" • 120"	V. CLOSE CLOSE MOD. CLOSE WIDE	47 27 - 127 127 - 367 367 - 1207	FRESH V. SLIGHT SLIGHT MODERATE	MOD. SEVERE SEVERE V. SEVERE COMPLETE
V. 90FT	- CAF			V. TH	eck	>120°	V. WIDE	>120°	BORING NO	BW108



	JECT: _					PHASE II EERING COMM	ITTEE		JOB NO: PAGE NO:	G-8026 1 of 2		
CON	NI: Tract					AND ENGINEER			LOCATION:	BW109		
	PMENT			E 75					ELEVATION:	659.15		
		CORE B.	ARREL				DRIENTATION		DATE START:	_10/11/90		
TYPE		HQ	Triple	Tube		X VERTICAL	INCLINED BEARING		DATE FINISH: DRILLER:	10/11/90 P. Bergman		
10		~ 2.	0 inche	98		HORIZONTAL	ANGLE FROM VE			: J. Gillespie		
DEPTH IN FEET	DRILL. RATE MIN. PER FOOT	CORE NO DEPTH RANGE	FT.	WERY %	RQO		FIELD CLASSIFICATION AND REMARKS					
		дание				samples take reason this b From the sur from ~ 50 ft. 69.5 ft. a five		are representation f by using a tri-colorehole was according to the correction of t	ive for this locatione roller bit and dvanced through countered. From mpetent bedrook /C casing was p	ion. For this d mud rotary. h saprolite and m 64.0 ft. to k. A total of 35		
1	4.75	69.5					ard, moderate to	•	•	•		
-70	5.50	C1	2.4	92	٥		light gray, coarse grained, QUARTZO-FELDSPATHIC SCHIST; close fractures, moderate to steeply dipping foliation.					
	6.05	72.1	2.0									
	7.0	72.1					hard, moderate to moderately severely weathered, coarse grained, QUARTZO-FELDSPATHIC SCHIST;					
	8.15		2.4	48		very close	very close to close fractures, moderate to steeply dipping foliation; fractures also exhibit manganese and or iron staining.					
-75	8.0	C2	4.95									
	10.05 9.05	77.05										
ļ	8.10	77.05			 		hard, moderate to moderately severely weathered,					
	8					QUARTZO	with orange to b	C SCHIST; ve	ry close cross			
	9	СЗ	2.0	40			ractures, with manganese and iron staining along breaks, noderate to steeply dipping foliation.					
⊢80	7.50		5.0									
	6.05	82.15										
	6.10	82.15					ard, moderate to			hered,		
	8.05	C4	5.0	58	0	QUARTZO	with orange to b D-FELDSPATHI with manganese	C SCHIST; ve	ry close cross			
_85	8.05				L		to steeply dippir			· ··=•		
	FIELD HARDNESS					DDING	DISCONTIN JOINT/SHEAR/I		WEAT	HERING		
V. HARD HARD MOD. HA SOFT V. SOFT	- SCR ARD - SCR - GRO	OVES	FRCULT	V. TH THIN MED! THIC V. TH	IUM K	<2" 2" - 12" 12" - 36" 36" - 120" ▶120"	V. CLOSE CLOSE MOD. CLOSE MIDE V. MIDE	<2" 2" - 12" 12" - 36" 36" - 120" >120"	FRESH V. SLIGHT SLIGHT MODERATE	MOD. SEVERE SEVERE V. SEVERE COMPLETE		
	- 041			""		- 124		*****	BORING NO.	BW109		

BORING NO. BW109 PAGE

DEPTH	DRILL	CORE NO.											
IN FEET	RATE MIN. PER FOOT	DEPTH RANGE	FT.	%	RQD	FIELD CLASSIFICATION AND REMARKS							
	6 7 8	C4 87.15	2.9 5.0	58	0	Medium hard, moderate to moderately severely weathered, light gray, coarse grained, QUARTZ-FELDPATHIC SCHIST; moderate to steeply dipping foliation, with black manganese staining along fracture faces.							
-90	6.20 7.05	87.15 C5 90.0	2.0	70	0	Medium hard, moderate to moderately severely weathered, light gray, coarse grained, QUARTZ-FELDPATHIC SCHIST; moderate to steeply dipping foliation; coarse to very coarse muscovite along fracture faces also very close fractures in a variety of orientations, with black manganese staining along fracture faces.							
						Bottom of Exploration at 90.0 feet.							
95						•							
—100													
— 105													
—110 Fi	ELD HAI	RDNESS			BEDI	DING DISCONTINUITIES WEATHERING JOINT/SHEAR/FRACTURE							
V. HARD - KNIFE CAN'T SCRATCH HARD - SCRATCHES DIFFICULT MOD. HARD - SCRATCHES EASILY SOFT - GROOVES V. SOFT - CARVES					IN UM K ICK	2"							

SIRRINF **TEST BORING REPORT ENVIRONMENTAL** BORING NO. BW110 **CONSULTANTS** PROJECT: MEDLEY FARM RUFS PHASE II MEDLEY FARM STEERING COMMITTEE CLIENT: G-8026 JOB NO: ATLANTA TESTING & ENGINEERING CONTRACTOR: PAGE NO: 1 of 3 CME-550 ATV EQUIPMENT USED: LOCATION: See Plan **ELEVATION:** CORE 625.23 **GROUND WATER** SAMPLER CASING DEPTH TO: (ft.) **DATE START:** BARRE 9/11/90 BOTTOM | BOTTOM OF CASING OF HOLE DATE IRS AFTER DATE FINISH: WATER 9/13/90 TYPE HSA s COMP **DRILLER:** P. Bergman 9/11/90 NE 35.5 6 1/4 in. 1 3/8 ln. 12 39.5 SIZE ID PREPARED BY: R. Burdine 140 lbs. HAMMER WT 30 in. HAMMER FALL CASING SAMPLER SAMPLE NUMBER SAMPLE DEPTH BLOWS PER FOOT DEPTH BLOWS FEET FIELD CLASSIFICATION AND REMARKS PFR 6 INCHES SILTY CLAY (CL) 6 3.5 10 Stiff, mottled orangish-yellowish and reddish-orange, dry **S1** 10 mostly clay, some sitt. -5.0 12 5.5 -RESIDUAL SOIL-8.5 8 S₂ SILT (ML) 8 -10.0 Medium dense, tan to gray, dry, mostly silt, little mica 10.5 11 flakes, trace clay. -SAPROLITE (SCHIST)-13.5 SILT (ML) 6 Medium dense, tan to gray, slightly moist, mostly silt, little **S**3 9 mica flakes, trace clay. -15.0 15.5 14 -SAPROLITE (SCHIST)-18.5 Medium dense, light tan, slightly moist, mostly silt, little mica flakes, trace clay. -SAPROLITE (SCHIST)-20.0 COMPONENT % GROUND WATER ABBREV. SAMPLE ID. BLOWS/FT. DENSITY BLOWS/FT. CONSISTENCY SPLIT SPOON MOSTLY 50 - 100% VERY SOFT 0 - 4 **VERY LOOSE** 0 - 2 WD - WHILE DRILLING TUBE UNDISTURBED PISTON NE - NOT ENCOUNTERED 5 - 10 LOOSE MEDIUM DENSE 3 - 4 5 - 8 SOFT MEDIUM STIFF UR - NOT READ 11 - 30 GRAB SAMPLE 31 - 50 9 - 15 STIFF TRACE 4% VERY DENSE VERY STIFF OTHER BORING NO. BW110 16 - 30 51+

NO RECOVERY

HARD

SIRRINE _

ENVIRONMENTAL CONSULTANTS TEST BORING REPORT PAGE 2 OF

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE		FIELD CLASSIF	CATION AND	REMARKS			
		•		20.5							
— 25 .0		7 15 20 32	\$ 5	23.5 25.5	Ver mic Not	AYEY SILT (ML) y dense, tan, slightly of a, trace gravel (gneisse) e: Drilling becoming of sity.	s). -s	APROLITE (GNEISS)-			
—30.0		6 22 25 24	\$6	28.5 30.5	Ver	AYEY SILT (ML) y dense, tan, slightly (a, trace gravel (gneis:	s).	it, some clay, few			
—35.0		10 33 26 42	S7	33.5 35.5	Ver	AYEY SILT (ML) y dense, tan, slightly a, trace gravel (gneis:	s).	it, some clay, few APROLITE (GNEISS)-			
— 40.0		100	58	38.5 39.0	Ver	AYEY SILT (ML) y dense, tan, slightly i a, trace gravel (gneiss AUGER F	· ·	APROLITE (GNEISS)-			
					Note: Ground water not encountered during augering. Upon obtaining auger refusal set up to mud rotary into competent rock and set a bedrock monitoring well						
—45.0											
BLOWS	/FT. DE	NSITY E	LOWS/F		SISTENCY	SAMPLE ID.		GROUND WATER ABBREV.			
0 - 4 5 - 10 11 - 30 31 - 50 51+	VERY L LOOSE MEDIUI DENSE VERY L	M DENSE	0 - 2 3 - 4 5 - 8 9 - 15 16 - 30 31+	SC MI S1 Ve	ERY SOFT DET EDIUM STIFF IFF ERY STIFF ARD	S SPLIT SPOON T TUBE U UNDISTURBED PISTON G GRAB SAMPLE X OTHER NR NO RECOVERY	MOSTLY 50 - 100% SOME 30 - 45% LITTLE 15 - 25% FEW 5 - 10% TRACE 45%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ BORING NO. BW110			

DEPTH	DRILL RATE	CORE NO.	RECO	VERY			FIELD CLASSIFICATION AND REMARKS					
FEET	MIN. PER FOOT	DEPTH RANGE	FT.	%	ROD							
						64.1 Feet	(Continued Fr	om Test Bori	ing Report)			
–65	4	64.1 C1	.6	27	0	64.1 Feet (Continued From Test Boring Report) Moderately hard to hard, moderately weathered, light-olive gray, medium grained, MUSCOVITE BIOTITE SCHIST; very close, moderately dipping joints; QUARTZ-FELDSPAR lens with vugs.						
		66.27	2.17			moderately	dipping joints; Q	UARTZ-FELD	SPAR lens v	vith vugs.		
	.8	66.27					resh, light olive					
	3.4		5.0	100		close to mo	g fractures, med derately close fr	actures, mode	rate to steep	ly dipping		
	4.4	C2	5.0	100	66	fractures, qu	15% dissemina Jartz feldspathic			•		
_70	3.4					foliation plan	1 0 S.					
	3	71.27				Very hard, f	resh, light olive (arav with mod	erate vellow	areen veins		
		71.27				infilling alon	iling along fractures, medium grained, GNEISS; well foliated, se to moderately close fractures, moderate to steeply dipping					
	4.8	.8 5.0				foliation; 10-15% disseminated pyrite, olivine mineral along fractures, quartz feldspathic medium grain veins, parting along						
	4.4 C3	cs	5.0	100	00 54	foliation planes.						
-75	6.2					Note: Olivine mineral more prevalent along fractures, voids and cavities in quartz veins; breaks predominately along foliation.						
	6.0	76.27				Very hard, fresh, light olive gray with moderate yellow green veins						
	5.4	76.27				infilling along fractures, medium grained, GNEISS; well foliated, close to moderately close fractures, very thin, moderate to steeply						
	7.0	5.0	5.0	100	92	dipping foliation; 10-15% disseminated pyrite, olivine mineral along fractures, quartz feldspathic medium grain veins, parting along						
	7.8	C4	5.0			foliation planes;						
L 80	6.5							mineral is significantly less, pyrite finely disseminated, no vugs or cavities; fractures predominately across				
	6	81.27				foliation.	, ugu u, ua	,	- p. 949/////	,		
	5	81.27	3.05				resh, light olive g fractures, med			green veins Il foliated, close		
	7	C5	3.23	94	94	to moderate	ly close fracture seminated pyrite	s, moderate t	o steeply dip	ping foliation;		
	8						long foliation					
85		84.5					Bottom of	Exploration a	et 84.5 ft.	<u></u>		
	ELD HA	RDNESS	<u>. </u>		BEDI	DING	DISCONTIN JOINT/SHEAR/F	UITIES		HERING		
HARD MOD. HA SOFT	MOD. HARD - SCRATCHES EASILY MED					<2" 2" - 12" 12" - 36" 36" - 120" >120"	V. CLOSE CLOSE MOD. CLOSE WIDE V. WIDE	2" - 12" 2" - 12" 12" - 36" 36" - 120" >120"	FRESH V. SLIGHT SLIGHT MODERATE	MOD. SEVERE SEVERE V. SEVERE COMPLETE		
L			 	<u> </u>				 .	BORING NO	. <u>BW110</u>		



ENVIRONMENTAL CORE BORING REPORT

	JECT: _			FARM		JOB NO:	G-8026					
CLIE	NT:			FARM		PAGE NO:	1 of 3					
	PMENT			E 75	IIIG /	AND ENGINEERING			LOCATION: ELEVATION:	BW111		
		ORE B					DRIENTATION		DATE START:	669.37 10/9/90		
TYPE		НО	Triple			X VERTICAL	INCLINED		DATE FINISH: DRILLER:	10/9/90 P. Bergman		
10		~ 2.	0 in.			HORIZONTAL	BEARING		-	Y: J. Gillespie		
DEPTH	DRILL	CORE	RECO	OVERY								
FEET	MIN. PER FOOT	DEPTH RANGE	FT.	*	RGD			SIFICATION A				
						samples were to rotary methods advanced through was encountered bedrock. A total	he close proximity taken for this locat with filtered air. Fugh saprolite and fied. From ~98 feet al of 150,0 feet of 4 ed in place in prep	ion. The borehol from the surface rom ~70 feet to ~ to 189.0 feet wa 4-inch stainless s	le was advance to ~70 feet, the -98 feet, the tra us drilled through steel and 40 fee	ed by 10 inch air e borehole was insition zone th competent		
	12	189.0								• • • • • • • • • • • • • • • • • • • •		
-190	14.5					1						
	11.75						very hard, fresh,					
	12.5 C1 10.0		10.0			grained, BIOTITE GNEISS; close, shallow dipping fractures well foliated.						
		10.0	100	93								
-195	12											
- 193	12					Note: Ep	oidote mineral d	eposited along	fractures.			
	12											
	10											
	9.5	199.0			_	_						
–200	9	199.0					very hard, fresh,					
	9	, ·					grained, BIOTITE GNEISS; close, shallow dipping fractures well foliated.					
	11	C2	10.0	100	95							
	14											
	14.5					Note: Ep	oidote mineral d	eposited along	fractures.			
<u>_205</u>		PONECO	L		D.C.	DOING						
FI	FIELD HARDNESS BE					DDING	DISCONTIN JOINT/SHEAR/		WEAT	HERING		
V. HARD HARD MOD. HA SOFT V. SOFT	HARD - SCRATCHES DIFFICULT THIN MOD. HARD - SCRATCHES EASILY MEDIUM SOFT - GROOVES THICK					<2" 2" - 12" 12" - 36" 36" - 120" >120"	V. CLOSE CLOSE MOD. CLOSE WIDE V. WIDE	-2" 2" - 12" 12" - 36" 36" - 120" >120"	FRESH V. SLIGHT SLIGHT MODERATE BORING NO	MOD. SEVERE SEVERE V. SEVERE COMPLETE		



SIRRINE ENVIRONMENTAL CORE BORING REPORT BORING NO. BW111 PAGE 2 OF 3

DEPTH	DRILL	CORE NO.	RECO	VERY								
IN FEET	RATE MIN. PER FOOT	DEPTH RANGE	FT.	%	RQD		FIELD CLASSIFK	CATION AN	D REMARKS			
205	13					Hard to very hard, fresh, dark to light gray, fine to medium						
	12	 	10.0	100	95	grained, B foliated.	grained, BIOTITE GNEISS; close, shallow dipping fractures well					
	15		10.0			Note: Gre	en mineral along h	nealed fractu	ıres; epidote m	nineral		
	-	208.6				group.						
_210	9	208.6		İ								
	8						ry hard, fresh, med dium to fine graine					
	10					steeply dip	ping smooth joints neral in-filling fract	and fractur	es, moderately	y foliated,		
	8	•	0.7			faces.	g			,		
	7	C3	9.7	97	95	Note: No	significant staining	along fractu	Jres.			
215	7					Shoore at	~ 200 and 214 #					
	13						Shears at ~ 209 and 214 ft.					
	13					Hard to very hard, fresh, medium gray with moderate yellowish green, medium to fine grained, GNEISS; close, moderately to steeply dipping, smooth joints and fractures, moderately foliated, epidote mineral in-filling fractures and also observed along joint faces. Hard to very hard, fresh, medium gray with moderate yellowish green, medium to fine grained, GNEISS; close to moderately close, shallow to moderately dipping, joints and fractures, moderately foliated, epidote mineral in-filling fractures and also observed along joint faces. Fractures are tighter than C3 with no clean breaks. Note: Some limited milky white quartz veining.						
	7											
	7	218.6 218.6										
—220	6											
-220	9		9.75		94							
	8											
	8			100								
	7	C4										
00-	8		9.75									
225	6											
	8											
	8											
	8	228.35										
	7	228.35										
—230												
FI	ELD HA	RDNESS	•		BEDO	DING	DISCONTINUI JOINT/SHEAR/FR		WEATH	IERING		
MARD MOD. HA SOFT	MOD. HARD - SCRATCHES EASILY				IN UM K ICK	<2" 2" - 12" 12" - 36" 36" - 120" >120"	CLOSE MOD. CLOSE WIDE	<2" 2" - 12" 12" - 36" 36" - 120" >120"	V. SLIGHT SLIGHT	MOD. SEVERE SEVERE V. SEVERE COMPLETE		

SIRRINE ______BORING REPORT BORING PAGE

DEPTH	DRILL CORE RECOVERY													
in Feet	MIN PER FOOT	DEPTH RANGE	FT.	*	RQD		ND REMARKS							
230	7	_					Hard to very hard, fresh, medium dark gray, medium grained, AMPHIBOLITE GNEISS; tight competent, healed fractures							
	6 7					separated due to drilling; shallow to moderately dipping foliation; no staining or oxidation along healed fractures.								
	9		10.15			Note: Mill	ky white Qtz veir	n at approxima	ately 234 ft.					
235	9	C5	10.15	100	100									
233	8													
	9													
	8	_												
	8	238.5 238.5				Hard to very hard, fresh, medium dark gray, medium grai								
240	8			AMPHIBOLITE GNEISS; tight competent, healed fraction is separated due to drilling; shallow to moderately dippir										
	11						g or oxidation ald			-				
	10													
	11	10.0		0.0										
	17	C 6	10.0	100	100									
 245	7													
	12													
	9													
	11	248.4												
050						В	ottom of Explo	ration at 248	.4 ft.					
 250														
:					:									
2 5 5														
FI	FIELD HARDNESS				BEDI	DING	DISCONTIN JOINT/SHEAR/		WEATHERIN	NG				
HARD	HARD - SCRATCHES DIFFICULT THII MOD. HARD - SCRATCHES EASILY MEI SOFT - GROOVES THE			V. TH THIN MEDI THICI V. TH	U M K	<2" 2" - 12" 12" - 36" 36" - 120" >120"	7. CLOSE 42" CLOSE 2"-12" CLOSE 2"-12" MOD. CLOSE 12"-36" MIDE 36"-120"		V. SLIGHT SEVE SLIGHT V. SE MODERATE COMP	VERE LETE				
				<u> </u>					BORING NO. B	W111				



CORE BORING REPORT

BORING NO. JOB NO: G-8026

	OJECT: MEDLEY FARMS RI PHASE II ENT: MEDLEY FARMS STEERING COMM							TTEE		ЮВ NO: G-8026
CLIE	ENT: MEDLEY FARMS STEERING CO NTRACTOR: ATLANTA TESTING AND ENGIN						ENGINEER	ING		PAGE NO: 1 of 3
	JIPMENT USED: CME 75					~,,,,	1			LOCATION: See Plan ELEVATION: 661.84
		ORE B						PRIENTATION		DATE START:
TYPE		HQ	Triple	Tube		X	VERTICAL	INCLINED BEARING		DATE FINISH: 10/25/90 DRILLER: P. Bergman
ID		2.0	inch				HORIZONTAL	ANGLE FROM VER		PREPARED BY: J. Gillespie
DEPTH IN FEET	DRILL RATE MIN. PER FOOT	CORE NO. DEPTH	RECC	VERY %	RQD	T		FIELD CLASS	IFICATION A	ND REMARKS
	7001	RANGE				+	Note:			
							170 O foot			
		179.0				+	179.0 feet		······································	
-180	18	,, 0.0								e to medium grained, steeply dipping, smooth
	13						joints with			ineral along faces; also
	13	C1	5.8	97	93				er nementan	of mafics; also upper .3
	10		6.0			1		primarily modera		
:	11									
-185	6	185.0 185.0				\dashv				
	8	105.0			1					dark gray, fine to
	9							grained, GNEIS arallel and cross		erate to steeply dipping, ion.
	6									
	6		10.0					egmatitic zones:	Coarse to ve	ery coarse grain
-190	6	C2	10.0	100	74		mica/feld	ispar.		
	7						Approx.		with green m	ineral along faces of
	5						Hactures	·		
	7									
	7	195.0								
–195 FI	ELD HAI		 3		BE	DDII	NG	DISCONTINI JOINT/SHEAR/F		WEATHERING
V. HARD - KNIFE CAN'T SCRATCH HARD - SCRATCHES DIFFICULT THIN MOD. HARD - SCRATCHES EASILY MEDIUM SOFT - GROOVES THICK V. SOFT - CARVES V. THICK			U M K	;	<2" 2" - 12" 12" - 35" 36" - 120" >120"	V. CLOSE CLOSE MOD. CLOSE WIDE V. WIDE	2" 2" - 12" 12" - 36" - 120" > 120"	FRESH MOD. SEVERE V. SLIGHT SEVERE SLIGHT V. SEVERE MODERATE COMPLETE BORING NO. BW112		

SIRRINE ENVIRONMENTAL CORE BORING REPORT BORING NO. BW112 PAGE 2 OF 3

	DRILL	CORE	RECO	VERY			 		AGE 2		
DEPTH IN FEET	RATE MIN. PER FOOT	NO. DEPTH RANGE	FT.	*	RQD		FIELD CLASSIFICATION AND REMARKS				
	3 7 7	195.0 C3 199.0	4.0	100	86	grained, Gi parallei and	fresh, medium da NEISS; close, mo d cross cutting fol led fractures and	derate to ste liation.	eply dipping,	shears	3
— 200	7 11 10 8 6.5	199.0	9.8	98	98	grained, Al healed frac Note: Mod fractures.	fresh, medium da MPHIBOLE GNEI tures and foliatio erate yellowish g No evidence of st , but no evidence	ISS; drill brea n moderate to reen minerali taining along	ks usually along steeply dipposed at the steeply dippo	ong bing. healed	
205	6.4 6 7 8	209.0	10.0				·				
—210	5 7 8	209.0									
	5 17 7 C3		10.0		0 100	Very hard, fresh, medium dark gray to dark gray, fine to medium grained, AMPHIBOLE GNEISS; drill breaks usually along					
— 2 15	7 7 6		10.0			healed frac	tures and foliatio	n moderate to	o steeply dipp	oing.	
—220	,	219.0 219.0									
FI	FIELD HARDNESS			BED	DING	DISCONTINU JOINT/SHEAR/FI		WEAT	HERING	3	
HARD MOD. HA SOFT	MOD. HARD - SCRATCHES EASILY		V. TH THIN MEDI THIC V. TH	UM K	<2" 2" - 12" 12" - 36" 36" - 120" >120"	V. CLOSE CLOSE MOD. CLOSE WIDE V. WIDE	<2" 2" - 12" 12" - 36" 36" - 120" >120"	FRESH V. SLIGHT SLIGHT MODERATE BORING NO	MOD. SI SEVERE V. SEVE COMPLE	RE	



IN MI	7 6 5 7 7 8	NO. DEPTH RANGE	FT.	*	RQD	Very hard, grained, Al	FIELD CLASSIF fresh, medium da MPHIBOLE GNE nd foliation mode	ark gray to da	irk gray, fine t	to medium	
	9 7 6 5 7		10.0			grained, Al	MPHIBOLE GNE	ISS; drill brea	ks usually ald		
- 225	7 6 5 7	C6	10.0			grained, Al	MPHIBOLE GNE	ISS; drill brea	ks usually ald		
225	6 5 7 7	C6	10.0			iractures a	no toliation mode	TAIL IN CIDEN			
225	5 7 7	C6	10.0					. 4.0 10 0100p1	y aipping.		
_ 225	7	C 6	10.0								
225	7	C6		400	100						
1 1	\neg		10.0	100	100						
	8										
-											
		229.0									
—230 —	7	229.0					Very hard, fresh, medium dark gray to dark gray, fine to mediur				
I	7						grained, AMPHIBOLE GNEISS; drill breaks usually along healed fractures and foliation moderate to steeply dipping.				
I ⊢	7										
 	5										
<u> </u> _	6	C 7	10.0	100	100	00					
—235 —	6		10.0								
	7										
	7										
	7	239.0									
							Bottom of Explo	oration at 23	9.0 ft.		
		!									
240											
<u> </u>											
-									•		
—245		_					2"		· · · · · · · · · · · · · · · · · · ·		
		RDNESS			BEDO	DING	DISCONTINU JOINT/SHEAR/FI		WEAT	HERING	
V. HARD HARD MOD. HARD SOFT V. SOFT	- SCRA	OVES	IFFICULT	V. TH THIN MEDI THIC V. TH	UM K	<2" 2" - 12" 12" - 36" 36" - 120" >120"	V. CLOSE CLOSE MOD. CLOSE WIDE V. WIDE	<2" 2" - 12" 12" - 36" 36" - 120" ⊳120"	FRESH V. SLIGHT SLIGHT MODERATE BORING NO.	MOD. SEVERE SEVERE V. SEVERE COMPLETE	

APPENDIX E MONITORING WELL INSTALLATION DETAILS

MEDLEY FARMS SITE RI GROUND WATER MONITORING WELL ELEVATIONS SEC JOB NO. G-8026

WELL/PT	LONGITUDE	LATITUDE	ELEVATION SLAB	ELEVATION TOP OF WELL CASING
SW1	81-40-00.734	34-59-07.128	688.66	690.47
SW3	81-39-39.003	34-58-51.655	669.90	671.56
SW4	81-39-49.236	34-58-44.011	668.68	671.39
SW101	81-39-53.682	34-58-52.597	601.15	604.18
SW102	81-39-56.177	34-58-49.499	617.43	620.07
SW103	81-40-02.306	34-58-50.495	633.40	635.68
SW104	81-40-05.451	34-58-53.413	647.46	649.85
SW106	81-40-01.449	34-58-48.070	592.91	596.12
SW108	81-39-57.235	34-58-57.210	602.85	605.28
SW109	81-40-02.960	34-58-51.859	658.65	661.26
PZ1	81-39-12.983	34-58-37.436	~ 573.44	575.41
PZ101	81-40-06.023	34-58-58.209	686.04	688.49
BW1	81-40-00.454	34-59-07.175	688.65	689.90
BW2	81-39-37.711	34-58-43.077	661.26	662.99

MEDLEY FARMS SITE RI GROUND WATER MONITORING WELL ELEVATIONS SEC JOB NO. G-8026

WELL/PT	LONGITUDE	LATITUDE	ELEVATION SLAB	ELEVATION TOP OF WELL CASING
BW3	81-39-12.903	34-58-37.836	573.44	574.82
BW4	81-39-10.868	34-58-08.916	562.65	564.32
BW105	81-40-03.299	34-58-54.333	669.37	671.55
BW106	81-40-01.475	34-58-47.965	592.51	595.76
BW108	81-39-57.279	34-58-57.302	603.15	605.64
BW109	81-40-02.864	34-58-51.916	659.15	661.47
BW110	81-39-55.013	34-58-51.691	625.23	626.36
BW111	81-40-03.204	34-58-54.503	~ 669.37	672.41
BW112	81-39-59.022	34-58-53.616	661.84	664.08
MD2A*	81-39-49.677	34-58-44.738	••	670.66

^{*} SCDHEC Well CONTROL POINTS:

PK Nail - BW2 Long: 81-39-37.739 / N 139547.1000

Lat: 34-58-43.074 / E 366724.7467

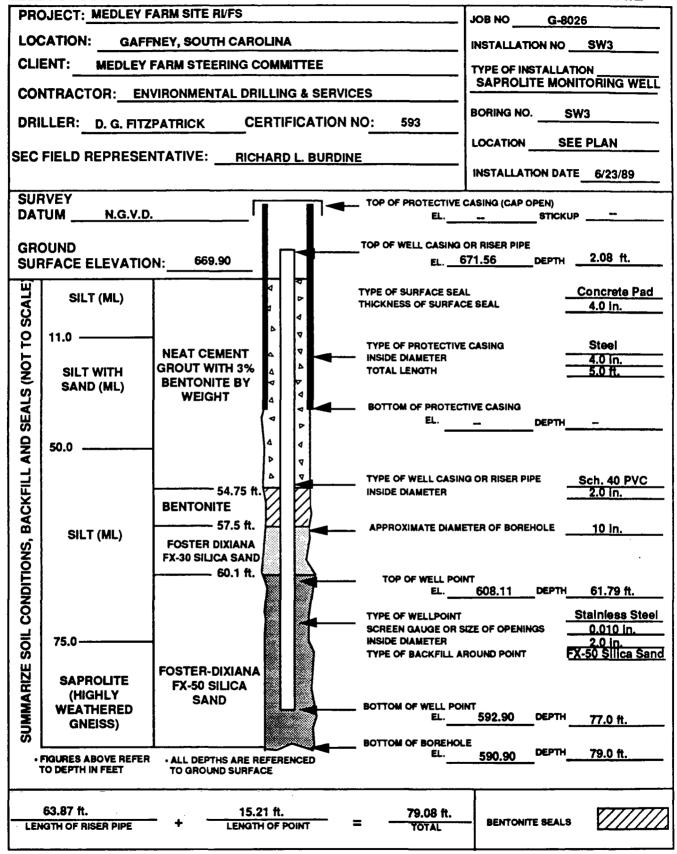
"X" in SW4 Long: 81-39-49.219 / N 139583.9181

Lat: 34-58-44.016 / E 366434.4926

SIRRINE ENVIRONMENTAL CONSULTANTS GROUND WATER MONITORING INSTALLATION DETAIL

PROJECT: MEDLEY FARM SITE RVFS	JOB NO G-8026
LOCATION: GAFFNEY, SOUTH CAROLINA	INSTALLATION NO SW1
CLIENT: MEDLEY FARM STEERING COMMITTEE	TYPE OF INSTALLATION
CONTRACTOR: ENVIRONMENTAL DRILLING & SERVICES	SAPROLITE MONITORING WELL
DRILLER: D. G. FITZPATRICK CERTIFICATION NO: 593	BORING NO. SW1
	LOCATION SEE PLAN
SEC FIELD REPRESENTATIVE: RICHARD L. BURDINE	INSTALLATION DATE 6/13/89
SURVEY DATUM N.G.V.D. TOP OF PROTECTIVE	CASING (CAP OPEN) 690.57 STICKUP 2.5 ft.
GROOND	690.47 DEPTH 2.4 ft.
TYPE OF SURFACE SEA	AL Concrete Pad
CLAYEY SILT TYPE OF SURFACE SEA THICKNESS OF SURFACE	·-
○ 7.0	.
NEAT CEMENT NEAT CEMENT O NEAT CEMENT NOTAL LENGTH	4.0 in.
BENTONITE BY	4.4 ft
WEIGHT 4 BOTTOM OF PROTECT	TIVE CASING
₩	686.17 DEPTH 1.9 ft.
Q SILT (ML)	
TYPE OF WELL CASI	0011, 40 40
BENTONITE INSIDE DIAMETER	2.0 in.
	ETER OF BOREHOLE 10 In.
FOSTER DIXIANA FX-30 SILICA SAND 48.0 TOP OF WELL PO EL.	
41.9 ft TOP OF WELL PO	
TYPE OF WELLPOINT SCREEN GAUGE OR:	SIZE OF OPENINGS 0.010 in.
O SILT WITH INSIDE DIAMETER TYPE OF BACKFILL A	ROUND POINT FX-50 Silica Sand
SAND (ML) FOSTER-DIXIANA	
FX-50 SILICA SAND BOTTOM OF WELL PO	IMT
CLAYEY SILT WITH SAND (ML) FOSTER-DIXIANA FX-50 SILICA SAND BOTTOM OF WELL PORTER BOTTOM OF WELL PORTER EL.	629.26 DEPTH 59.4 ft.
BOTTOM OF BOREHO	E 623.66 DEPTH 65.0 ft.
• FIGURES ABOVE REFER • ALL DEPTHS ARE REFERENCED TO DEPTH IN FEET TO GROUND SURFACE	023.00
46.60 ft. 15.2 ft. 61.80 ft.	9777777
LENGTH OF RISER PIPE + LENGTH OF POINT = TOTAL	BENTONITE SEALS



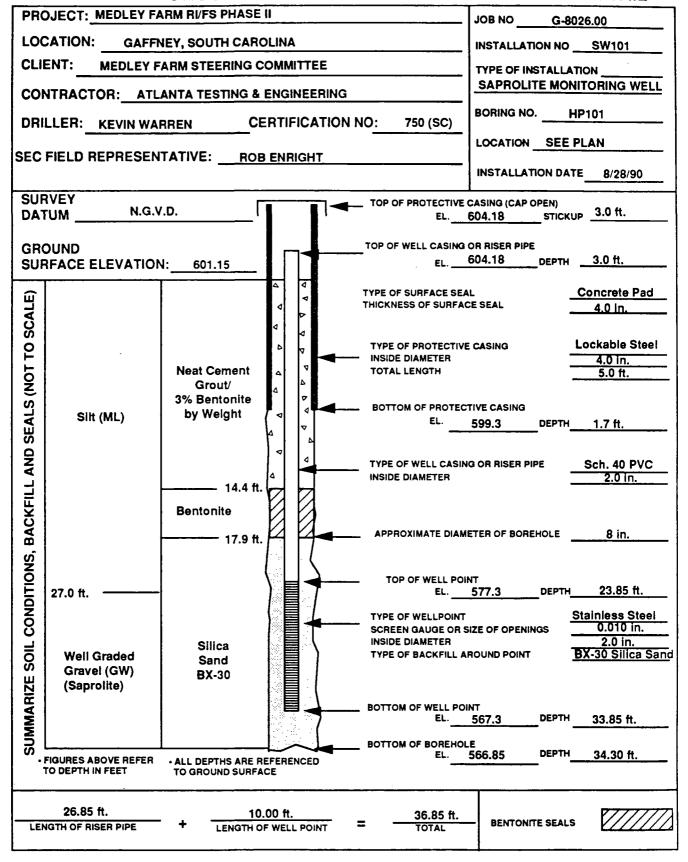


SIRRINE ENVIRONMENTAL CONSULTANTS GROUND WATER MONITORING INSTALLATION DETAIL

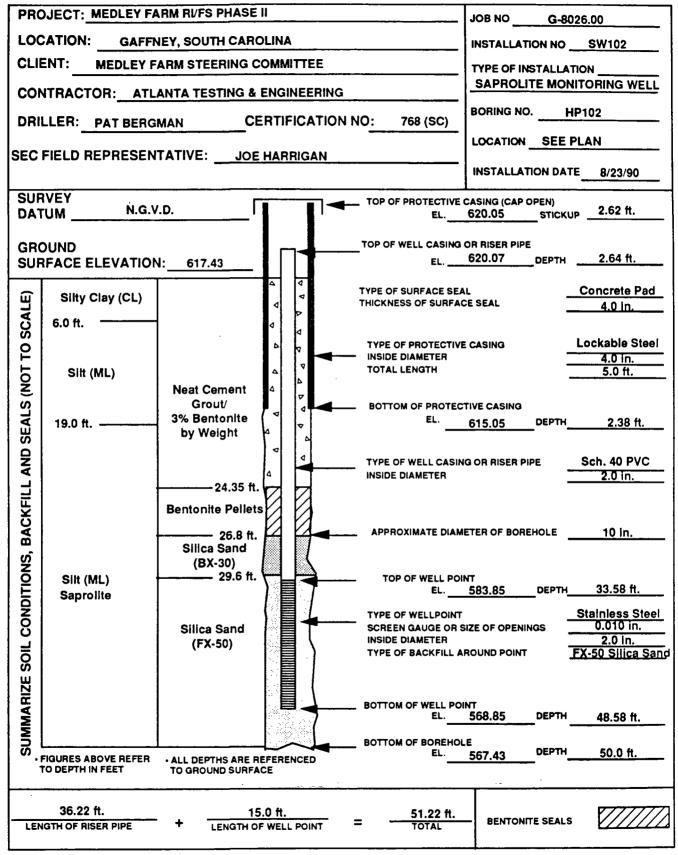
PROJECT: MEDLEY FARM SITE RVFS	JOB NO G-8026
LOCATION: GAFFNEY, SOUTH CAROLINA	INSTALLATION NO SW4
CLIENT: MEDLEY FARM STEERING COMMITTEE	TYPE OF INSTALLATION
CONTRACTOR: ENVIRONMENTAL DRILLING & SERVICES	
DRILLER: D. G. FITZPATRICK CERTIFICATION NO: 593	BORING NO. SW4
SEC FIELD REPRESENTATIVE: RICHARD L. BURDINE	LOCATION SEE PLAN
	INSTALLATION DATE 7/12/89
	CASING (CAP OPEN)
GROUND TOP OF WELL CASING	
SURFACE ELEVATION: 668.68	671.39 DEPTH 3.2 ft.
SILTY CLAY (ML) TYPE OF SURFACE SE THICKNESS OF SURFA	
NEAT CEMENT GROUT WITH 3% BENTONITE BY WEIGHT NEAT CEMENT HISTOR OF PROTECTIVE HISTOR OF PRO	4.0 In. 5.0 ft.
46.2 ft. BENTONITE 49.1 ft. APPROXIMATE DIAM	NG OR RISER PIPE Sch. 40 PVC 2.0 in.
SANDY SILT (ML) FOSTER DIXIANA FX-30 SILICA SAND 55.0 TOP OF WELL PO	HNT 615.58 DEPTH 53.1 ft.
TYPE OF WELLPOINT	Stainless Steel SIZE OF OPENINGS 0.010 in. 2.0 in.
SILT (ML) FOSTER-DIXIANA FX-50 SILICA SAND SCHEEN CAUGE OR INSIDE DIAMETER TYPE OF BACKFILL A BOTTOM OF WELL PO EL. BOTTOM OF BOREHO EL. BOTTOM OF BOREHO EL.	600.38 DEPTH 68.3 ft.
TO DEPTH IN FEET TO GROUND SURFACE	
56.3 ft. 15.2 ft. 71.5 ft. LENGTH OF POINT = TOTAL	BENTONITE SEALS



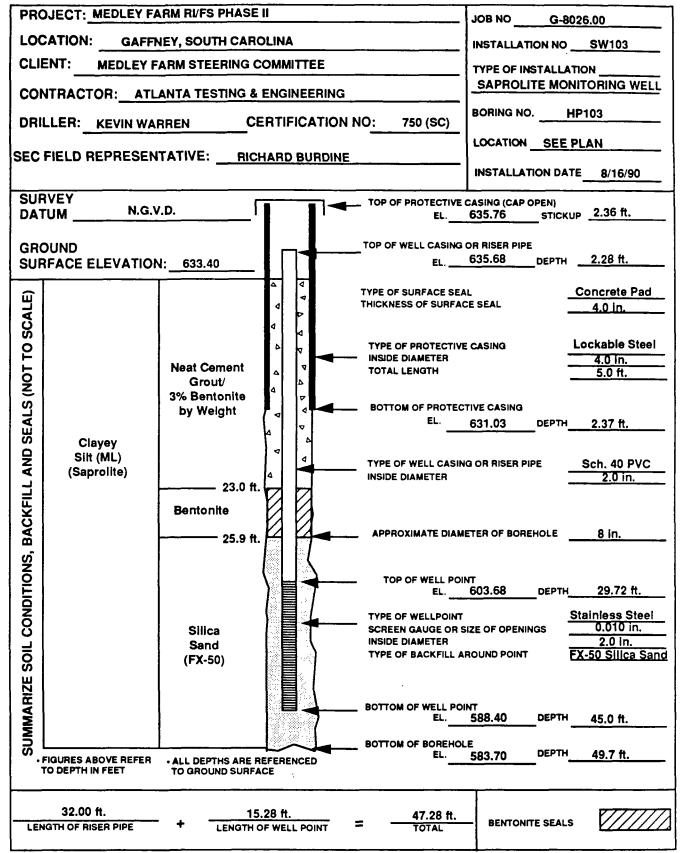
GROUND WATER MONITORING INSTALLATION DETAIL



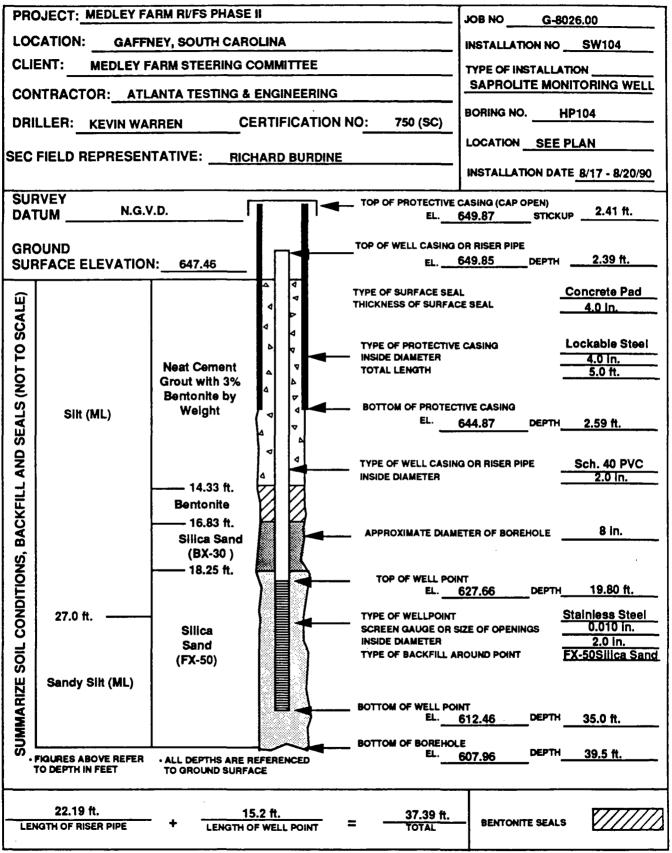




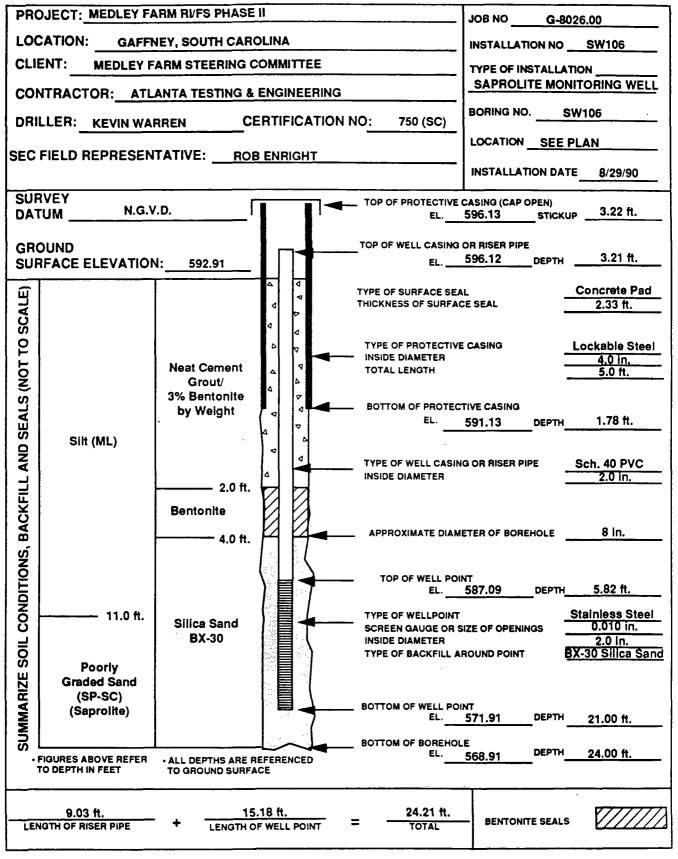












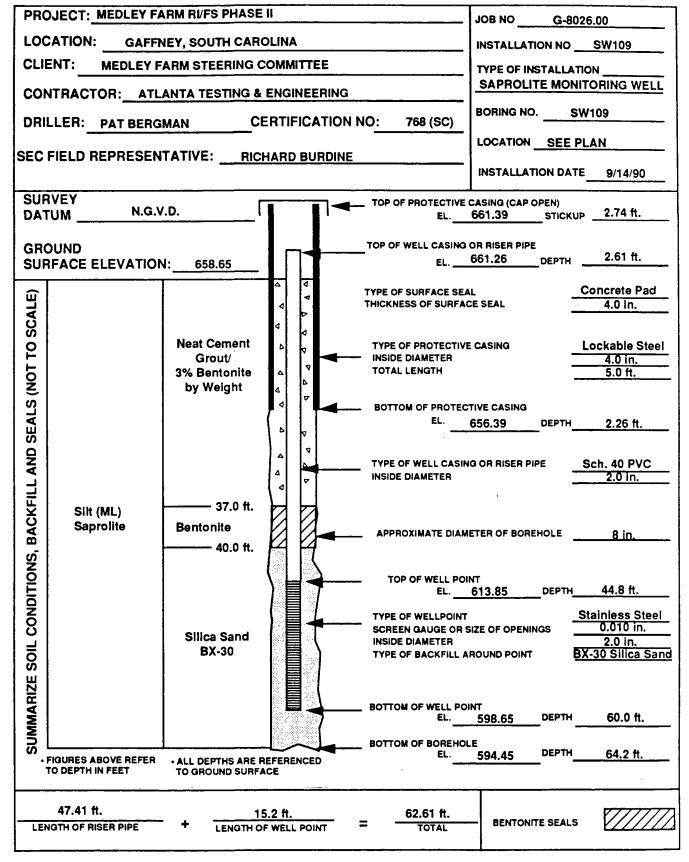


GROUND WATER MONITORING INSTALLATION DETAIL

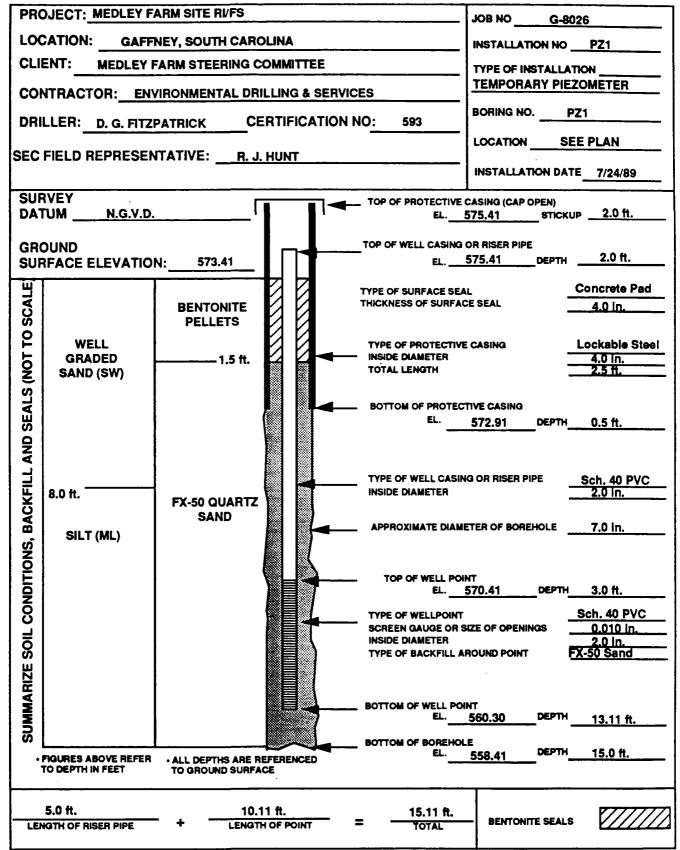
PROJECT: MEDL	JOB NO	26.00	
LOCATION:	INSTALLATION NO	SW108	
CLIENT: MED	TYPE OF INSTALLA		
CONTRACTOR:_	ATLANTA TESTING & EN	INEERING MONITORII	NG WELL
DRILLER: KEVI	N WARREN CER	FICATION NO: 750 (SC) BORING NO. S	W108
SEC EIEI O BEDDI	SENTATIVE: JOE H	LOCATION SEE I	PLAN
	JOE H.	INSTALLATION DAT	E8/30/90
SURVEY DATUM	N.G.V.D.	TOP OF PROTECTIVE CASING (CAP OPEN) EL. 605.32 STICKU	p <u>2.47 ft.</u>
GROUND		TOP OF WELL CASING OR RISER PIPE	
SURFACE ELEVA	ATION: 602.85	EL. 605,28 DEPTH	2.43 ft.
SCALE)	Neat Cement	TYPE OF SURFACE SEAL THICKNESS OF SURFACE SEAL	Concrete Pad 4.0 in.
	Grout/ 3% Bentonite by Weight	TYPE OF PROTECTIVE CASING INSIDE DIAMETER TOTAL LENGTH	4.0 in. 3.47 ft.
SEALS (NOT TO	1.0	BOTTOM OF PROTECTIVE CASING EL. 601.85 DEPTH	1.0 ft,
BACKFILL AND HIS (TM)	Bentonite	TYPE OF WELL CASING OR RISER PIPE INSIDE DIAMETER	Sch. 40 PVC 2.0 in.
	3.0	APPROXIMATE DIAMETER OF BOREHOLE	10 in.
NDITIONS,		TOP OF WELL POINT EL. 598.72 DEPTH TYPE OF WELLPOINT	4.13 ft. Stainless Steel
8	Silica Sand	SCREEN GAUGE OR SIZE OF OPENINGS INSIDE DIAMETER	0.010 in. 2.0 in.
	(BX-30)		X-30 Silica Sand
SIR (ML) Saprolite		BOTTOM OF WELL POINT EL. 583.66 DEPTH	19.19 ft.
FIGURES ABOVE R	EFER • ALL DEPTHS ARE REFE TO GROUND SURFACE	BOTTOM OF BOREHOLE EL. 582.85 DEPTH	20.0 ft.
6.56 ft.	15.06 E + LENGTH OF W		



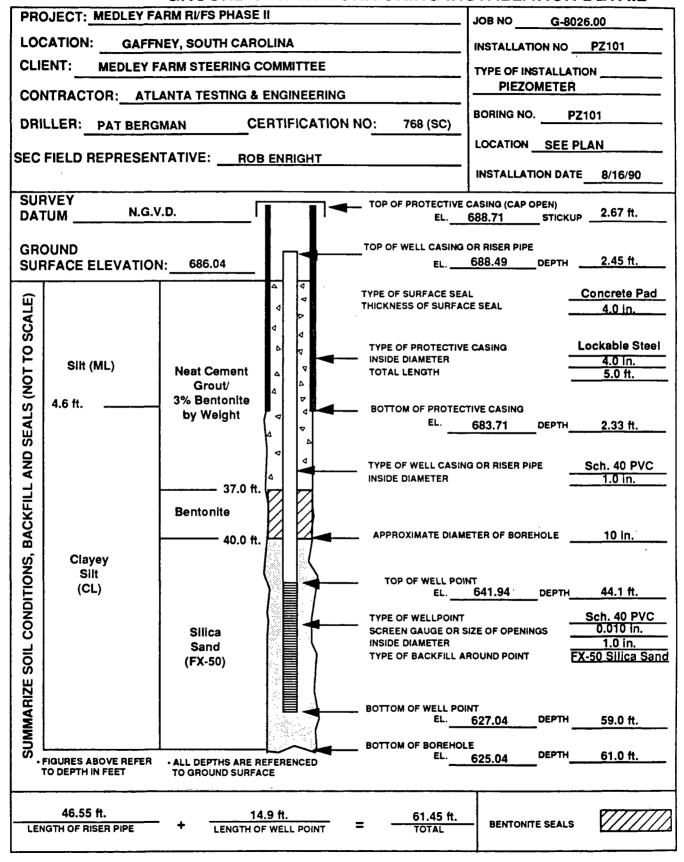
GROUND WATER MONITORING INSTALLATION DETAIL













SIRRINE ENVIRONMENTAL CONSULTANTS GROUND WATER MONITORING INSTALLATION DETAIL

PRO	DECT: MEDLEY F	ARM SITE RUFS				JOB NO G-8026
LOC	CATION: GAFF	NEY, SOUTH CAR	LINA	ı		INSTALLATION NO BW1
CLIENT: MEDLEY FARM STEERING COMMITTEE						TYPE OF INSTALLATION BEDROCK
CON	NTRACTOR: EN	VIRONMENTAL DR	LLING	G & SERVIC	ES	MONITORING WELL
	LLER: D. G. FITZ			ICATION I		BORING NO. BW1
						LOCATION SEE PLAN
SEC	FIELD REPRESEI	NTATIVE: RICH	HARD	L. BURDIN	<u> </u>	INSTALLATION DATE 6/8/89
	RVEY TUM N.G.V.D.		1	∏ →	_ TOP OF PROTECTIVE (CASING (CAP OPEN) 690.30 STICKUP 1.9 ft.
	DUND RFACE ELEVATIO	N: 688.65	ĪГ	↑	TOP OF WELL CASING (OR RISER PIPE 689.90 DEPTH 1.5 ft.
			╂┤	-		L Concrete Pad
SCALE			4 4	Þ	TYPE OF SURFACE SEA THICKNESS OF SURFACE	
SEALS (NOT TO S		NEAT CEMENT GROUT WITH 3%	4 4 4	4	TYPE OF PROTECTIVE INSIDE DIAMETER TOTAL LENGTH	Steel 6.0 In. 3.5 ft.
EAL		BENTONITE BY WEIGHT	4		BOTTOM OF PROTECT EL.	
		. WEGITI		>		686.80 DEPTH 1.5 ft.
ILL AND	SAPROLITE		4 6	4	TYPE OF WELL CASING	G OR RISER PIPE Sch. 40 PVC 4,0 in.
BACKFILL			\ P	1	BOTTOM OF SCH. 40 P TOP OF STAINLESS ST	40.04
				4	APPROXIMATE DIAME	ETER OF BOREHOLE 10 in.
Š	80.6		图	K)		
ONDITIONS,		85.6	以	<u> </u>	BOTTOM OF CASIN	·
꽃		1	剧	树	EL	
ဗ	BEDROCK		冈	·	TYPE OF WELLPOINT SCREEN GAUGE OR S	ZE OF OPENINGS OPENINGS
SOIL	(GNEISS)	OPEN CORE HOLE			INSIDE DIAMETER	3.8in.
ZE S		HOLE	図	缀	TYPE OF BACKFILL AI	ROUND POINT
SUMMARIZE						
Ž.			泛	%	BOTTOM OF WELL PO!! EL.	NT DEPTH
S			绘	※		
• !	FIGURES ABOVE REFER TO DEPTH IN FEET	• ALL DEPTHS ARE R TO GROUND SURFA		NCED	BOTTOM OF BOREHOL	593.85 DEPTH 94.8 ft.
	85.6 ft.	9.2		E NO. E	94.8 ft.	BENTONITE SEALS
LEN	MIN OF CASING	T LENGTH O	# CORI	E HOLE	TOTAL	



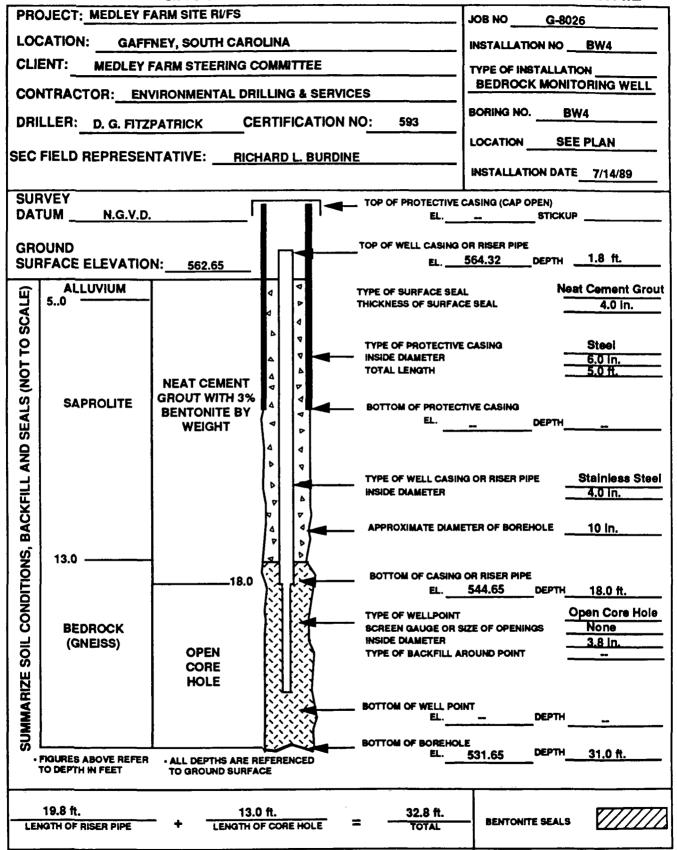
GROUND TOP OF WELL CASING	STICKUP
NEAT CEMENT GROUT WITH 3% BENTONITE BY WEIGHT SAPROLITE NEAT CEMENT GROUT WITH 3% BENTONITE BY WEIGHT TYPE OF SURFACE SE THICKNESS OF SURFACE NISIDE DIAMETER TOTAL LENGTH TYPE OF WELL CASH NISIDE DIAMETER BOTTOM OF SCH. 40 TOP OF STAINLESS SEL APPROXIMATE DIAM TYPE OF WELLPOINT TYPE OF WELLPOINT	AL CE SEAL Neat Coment Grout GE SEAL 65.0 ft. E CASING Steel 6.0 In. 5.0 ft. CTIVE CASING DEPTH Stainless Steel & Sch. 40 PVC 4.0 In. EFEEL RISER PIPE 54.3 ft. STEEL RISER PIPE 10 In. STAINLESS STEEL SEAR STEEL SEAR STEEL SEAR STEEL SEAR SEAR STEEL SEAR SEAR SEAR SEAR SEAR SEAR SEAR SEAR
FRGURES ABOVE REFER TO DEPTHS ARE REFERENCED TO GROUND SURFACE 65.78 ft. LENGTH OF CASING OPEN CORE INSIDE DIAMETER TYPE OF BACKFILL ABOUT OF WELL PORT OF BACKFILL ABOUT OF BOTTOM OF WELL PORT OF BOTTOM	3.8in

Note: Due to corehole instability 2 inch stainless steel screen and riser were installed inside the corehole with PVC riser pipe to the surface. A sanitary seal was used around the 2 inch to seal the space between the 2-4 inch casing.

SIRRINE
ENVIRONMENTAL
CONSULTANTS GROUND WATER MONITORING INSTALLATION DETAIL

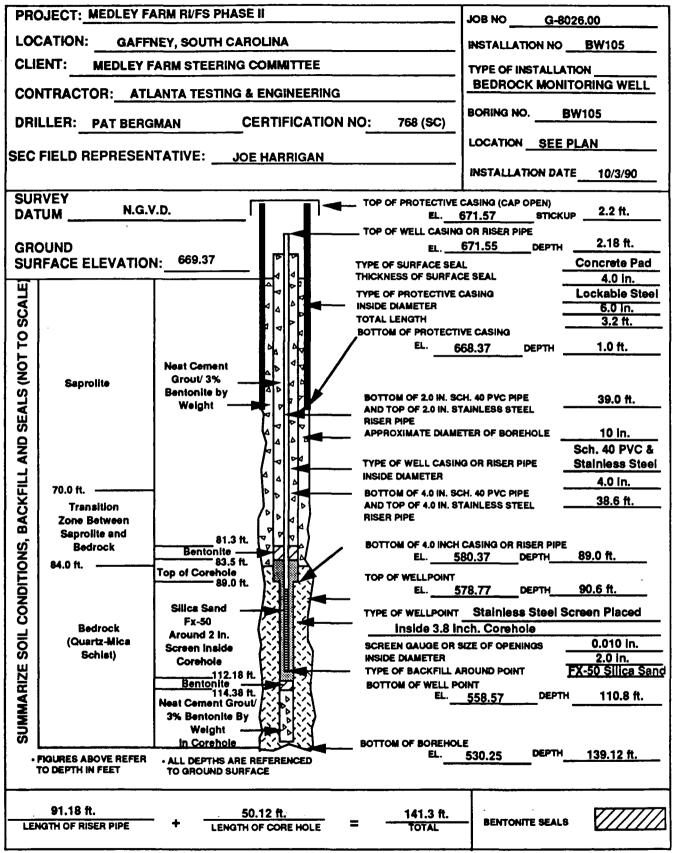
PROJECT:	MEDLEY FARM S	TE RVFS			JOB NO G-8	026
LOCATION:	GAFFNEY, S		INSTALLATION NO	BW3		
CLIENT:	MEDLEY FARM S		TYPE OF INSTALLA			
CONTRACT	OR: ENVIRONA	AFNTAL DRILLING	A SERVICE		BEDROCK MON	
					BORING NO.	BW3
DRILLER:_	D. G. FITZPATRIC	CERTIF	ICATION N	0: 593		
SEC FIELD F	REPRESENTATIV	E: RICHARD	L. BURDINE		LOCATIONS	EE PLAN
					INSTALLATION DA	TE 7/18/89
SURVEY				TOP OF PROTECTIVE C	CASING (CAP OPEN)	
DATUM	N.G.V.D.	' j		EL	STICK	UP
GROUND		I _		TOP OF WELL CASING O	-	
SURFACE E	LEVATION:	573.44		EL	574.82 DЕРТН	1.75 ft.
Ë		4		TYPE OF SURFACE SEAL	•	Concrete Pad
SCALE		a	4	THICKNESS OF SURFACE	E SEAL	4.0 In.
<u>e</u>		۵	4	TYPE OF PROTECTIVE	CARINO	Steel
[5]		T CEMENT JT WITH 3%	4	TYPE OF PROTECTIVE INSIDE DIAMETER	CASING	6.0 ln.
Ž		TONITE BY	A	TOTAL LENGTH	•	5.0 ft.
SAPR	OLITE Y	VEIGHT	٥	BOTTOM OF PROTECT	IVE CASING	
SEALS (NOT TO		(4	D	EL.	DEPTH	
2	ļ	اه	4			Stainless Steel &
LA		•	-	TYPE OF WELL CASING INSIDE DIAMETER	3 OR RISER PIPE	Sch. 40 PVC 4.0 in.
ADITIONS, BACKFILL AND		()	V	BOTTOM OF SCH. 40 PV	C RISER PIPE AND	
اق		\ \rangle	V	TOP OF STAINLESS ST		3.2 ft.
80		4	1	APPROXIMATE DIAME	TER OF BOREHOLE	10 in.
X 30.5 -		لع				
Ĕ		—— 35.5 \		BOTTOM OF CASING		0.5.4
	į	[3]	図	EL	537.94 DEPTH	35.5 ft.
8		图	*	TYPE OF WELLPOINT SCREEN GAUGE OR SI	ZE OF OPENINGS	Open Core Hole None
GN BED		OPEN S		INSIDE DIAMETER TYPE OF BACKFILL AF	OUND BOINT	3.8 ln.
SUMMARIZE SOIL BED	· I	CORE (X)		TIPE OF BACKFILL AP	IOOND POINT	
A B		③	図			
\ <u>\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \</u>			-	BOTTOM OF WELL POINEL.	VT DEPTH	••
l IS				BOTTOM OF BOREHOLI		
		DEPTHS ARE REFERE	NCED	EL.	518.44 DEPTH	55.0 ft.
TO DEPTH	IN FEET TO G	ROUND SURFACE				
36.75 ft.		20.0.4		20 7F 4		77777
LENGTH OF R		20.0 ft.	E HOLE =	56.75 ft.	BENTONITE SEALS	s (/////
1					1	





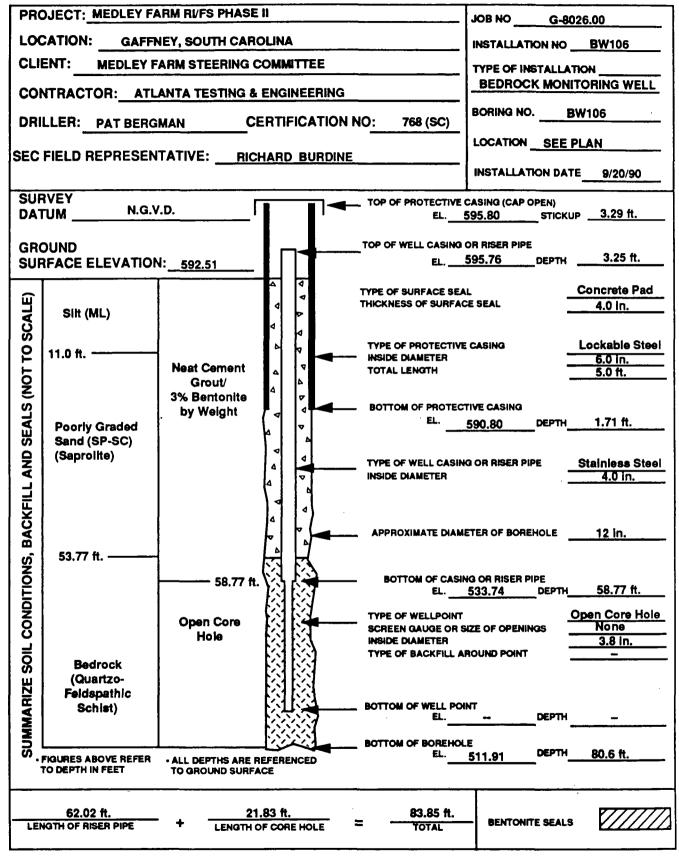


GROUND WATER MONITORING INSTALLATION DETAIL

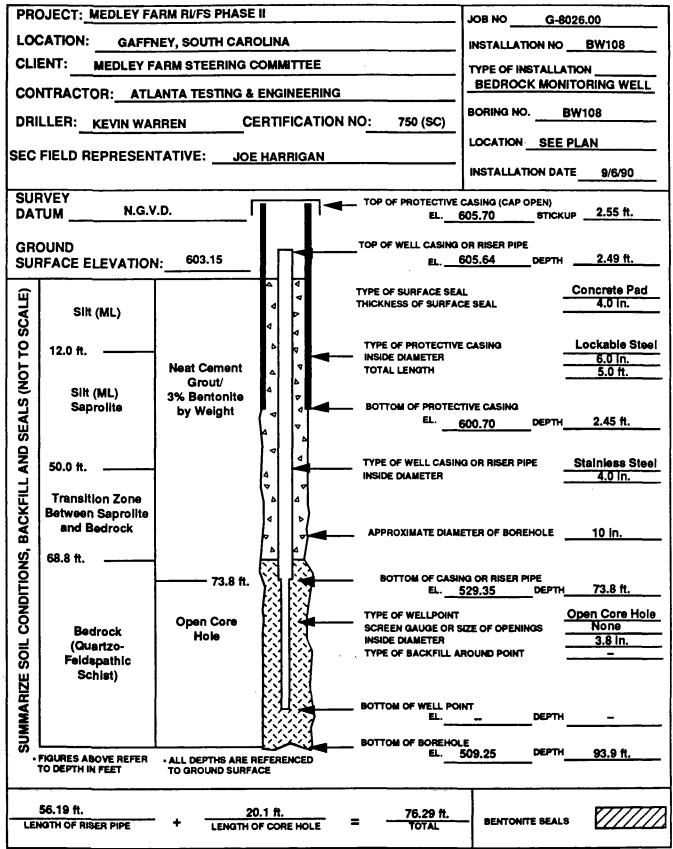


Note: The lower 24.74 ft. of the corehole was grouted, then a 2.0 inch monitoring well was installed.

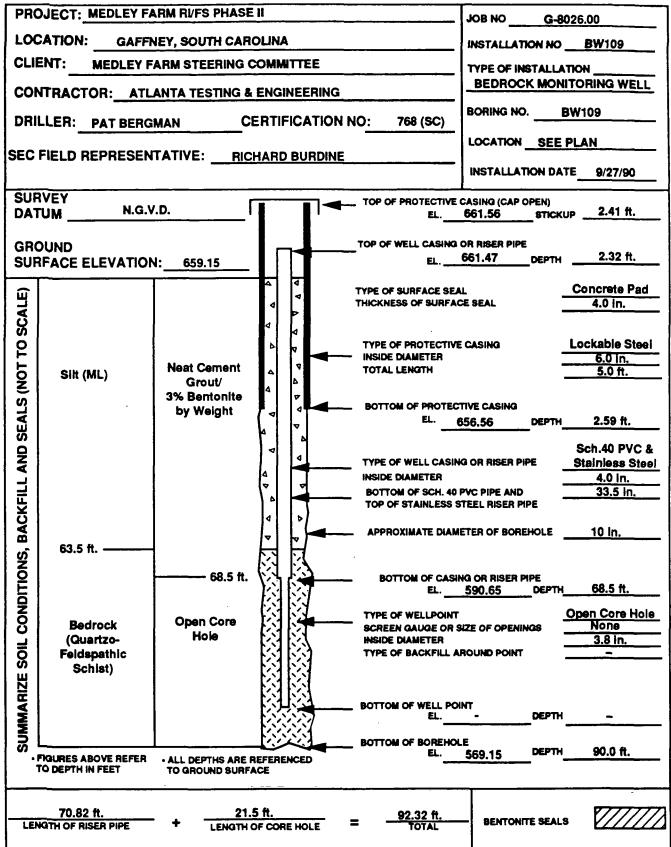




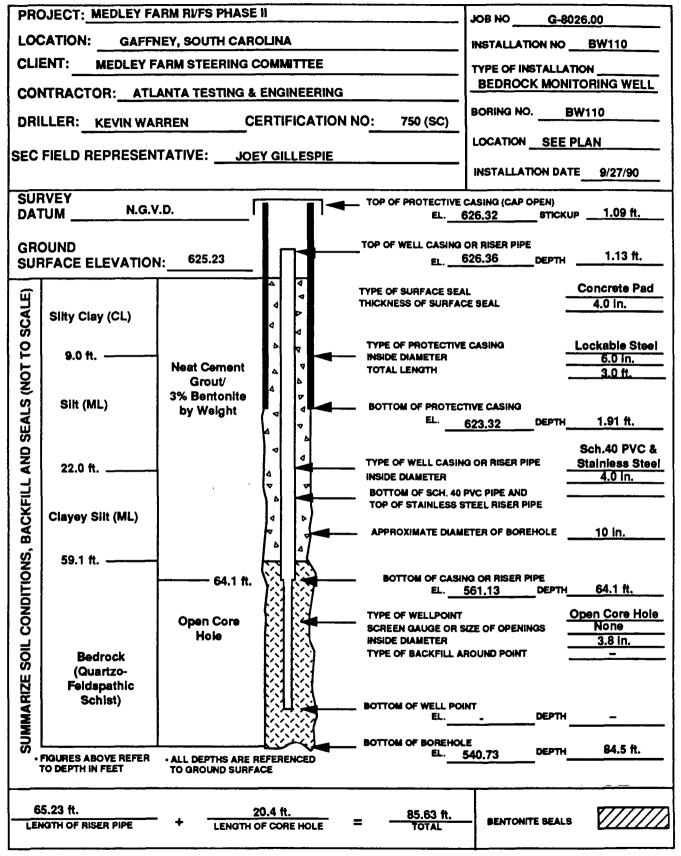




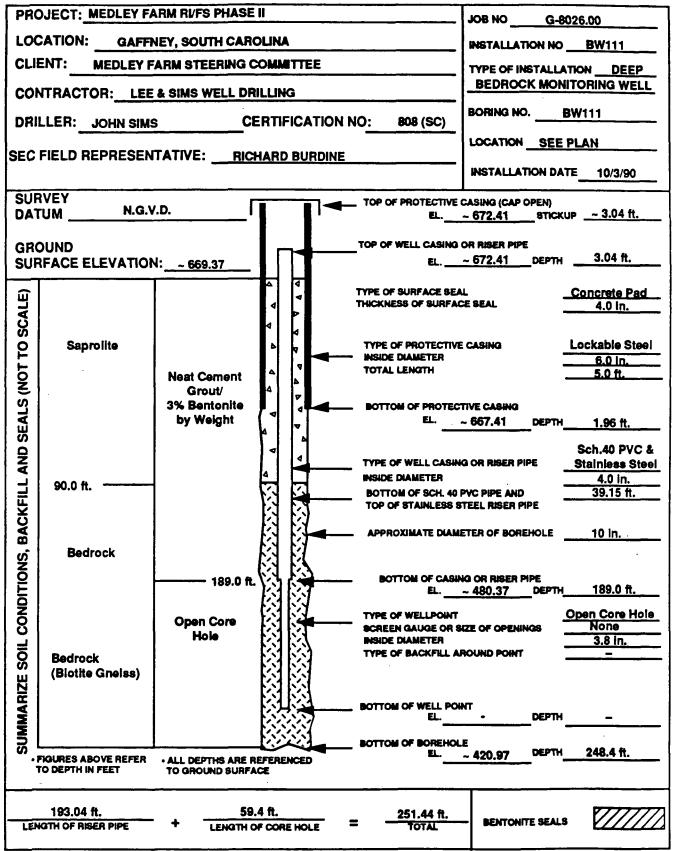




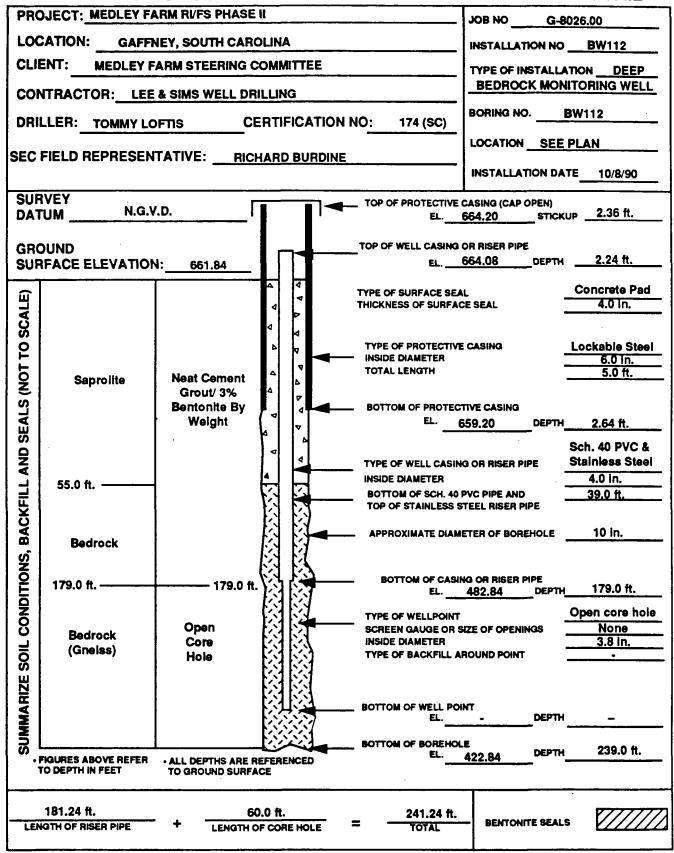












Filter Sands

Typical Screen Analysis

Percent Retained Cumulative

U.S.			s.B.Filter
Mesh	FX99	FX50	(wet)
6 .	0.0		0.0
8	4.6		0.0
10	20.0		0.5
12	62.7		1.5
14	93.2	0.0	4.6
16	98.9	1.0	8.6
18	99.5	9.5	
20	99.8	26.5	
25	99.9	45.9	47.6
30	99.9	74.5	63.9
35	100.0	92.4	79.9
40	100.0	97.8	
45	100.0	99.3	
		99.8	
50		99.9	
70	100 0		100.0
Pan	100.0	100.0	100.0
Effective			
Size	1.431	0.513	0.416
Uniformity			
Coefficient	1.299	1.466	1.863

Percent Retained Per Sieve

U.S.			s.B.Filter
Mesh	FX99	FX50	(wet)
			** ** **
6	0.0		0.0
8	4.6		0.0
10	15.4		0.5
12	42.7		1.0
14	30.5	0.0	3.1
16	5.7	1.0	4.0
18	0.6	8.5	9.6
20	0.3	17.0	13.2
25	0.1	19.4	16.2
30	0.0	28.6	16.3
35	0.1	17.9	16.0
40	0.0	5,4	9.5
45		1.5	4.9
50		0.5	2.8
70		0.1	2.0
Pan	0.0	0.1	0.9

sandblasting sands

Typical Screen Analysis
Percent Retained Cumulative

U.S. Mesh	BX8	BX12	BX30	BX 40
6	0.0			
8	1.2	0.0		
12	10.3	0.6		
16	26.9	10.6		
20	48.7	33.5	0.1	0.1
30	80.6	68.6	6.0	1.2
40	96.4	92.1	31.4	12.9
50	100.0	99.7	66.7	45.7
70	200.0		87.6	76.9
			96.1	92.2
100	•		99.2	98.8
140				99.9
200			99,8	-
270			100.0	100.0
Pan	100.0	100.0	100.0	100.0

Percent Retained Per Sieve

BX8	BX12	вх30	BX40
0.0			
	0.0		
-		0.0	0.0
		0.1	0.1
		5.9	1.1
		25.4	11.7
		35.3	32.8
		20.9	31.2
		8.5	15.3
		3.1	6.6
		0.6	1.1
		0.2	0.1
		0.0	0.0
	0.0 1.2 9.1 16.6 21.8 31.9 15.8 3.6	0.0 1.2 0.0 9.1 0.6 16.6 10.0 21.8 22.9 31.9 35.1 15.8 23.5	0.0 1.2 0.0 9.1 0.6 16.6 10.0 0.0 21.8 22.9 0.1 31.9 35.1 5.9 15.8 23.5 25.4 3.6 7.6 35.3 20.9 6.5 3.1 0.6 0.2

APPENDIX F MONITORING WELL DEVELOPMENT LOGS

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Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Date Started	(yr/mo/day) 89/7/6	Date Completed (yr/mo/day) 89/7/6	
Field Person	nnel <u>M. WARD</u>		
Site Name _	MEDLEY FARMS	GAFFNEY, SC	
SEC Job #_	G-8026		
Well ID #	SW-1		
<u> </u>	UpgradientDowng	gradient	
Weather Co	nditions OVERC	CAST	
Air Tempera	iture	26.5	<u>°C</u>

Total Well Depth (TWD) =	62.0	тос	1/100 ft
Depth to Ground Water (DGW) =	52.1	тос	1/100 f
Length of Water Column (LWC) = TV	VD - DGW =	9.9	1/100 f
1 Casing Volume (OCV) = LWC x	163=_	1.61	gallons
5 Casing Volumes =		8.07	gallons
Method of Well Development	BRAINARD-	(ILMAN HAND PU	MP
Total Volume of Water Removed		41	gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	pН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1345		2	22.2	7.19		75	very turbid	2	
1352		4	19.1	6.67	 	101	very turbid	2	
									Surge for 1 minute
1400		6	19.0	6.25		102	very turbid	2	
1410		8	17.4	6.29		90	very turbid	2	
1415		10	18.0	6.50		92	turbid	1	
1419		12	18.1	6.59		91	turbid	1	well pumped dry
1425		14	18.3	6.49		86	turbid	1	
1428		16	18.5	6.50		84	turbid	1	
1432		18	18.3	6.51		83	turbid	1	

COMMENTS/OBSERVATIONS:	 	 	 	 	 	 	 	 	 	
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Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Date Started (yr/mo/day) 89/7/6	Date Completed (yr/mo/day) 89/7/6
Field Personnel M. WARD	
Site Name MEDLEY FARMS	GAFFNEY, SC
SEC Job # G-8026	
Well ID # SW-1	
X UpgradientDown	gradient
Weather Conditions OVERC	AST
Air Temperature	26.5 ℃

Total Well Depth (TWD) =	62.0	тос	1/100 ft
Depth to Ground Water (DGW) =	52.1	тос	1/100 ft
Length of Water Column (LWC) = 1	WD - DGW =	9.9	1/100 ft
1 Casing Volume (OCV) = LWC x	.163 =	1.61	gallons
5 Casing Volumes =		8.07	gallons
Method of Well Development	BRAINARD-K	ILMAN HAND PUMP	
	<u> </u>		
Total Volume of Water Removed _		41	gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1514		20	19.0	6.00		76	turbid	1	
1533		24	18.5	6.30		81	turbid	1	
1544		. 28	18.9	5.90		80	_turbld	_ 1	
1550		30	18.7	6.13		80	turbid	1	
1601		34	18.5	6.20		79	turbid	1	well pumped dry
1635		36	18.7	6.10		82	turbid	1	
1641		38	18.5	6.12	<u> </u>	81	turbid	0	
1647		41	18.5	6.14		82	turbid	0	
				<u> </u>				<u> </u>	

COMMENTS/OBSERVATIONS:		 			_	
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Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Date Started (yr/n	no/day) 90/8/22 Date Completed (yr/mo/day) 90/8/23
Field Personnel _	Rob Enright, Richard Burdine
Site Name	Medley Farm RI/FS - Phase II
SEC Job #	G-8026
Well ID #	SW1
XUpgra	adientDowngradient
Weather Conditio	ns Hazy, Hot, and Humid
Air Temperature	32 %

61.80 TOC	1/100 ft				
49.50 TOC	1/100 ft				
12.30	1/100 ft				
2.00	gallons				
10.00	galions				
Method of Well Development Alternating Surge Block,					
n Bailer					
107.0	gallons				
	49.50 TOC 12.30 2.00 10.00 Surge Block,				

Date/Time 8/22/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
850	1.0	2.5	15.0	6.10		310	turbid/brown	1	
900	1.0	5.0	14.5	5.78		280	turbid/brown	0	
909	1.0	7.5	14.5	6.06		270	turbid/brown	0	
915	1.0	10.0	14.1	6.20		270	turbld/brown	0	
922	1.0	12.5	14.1	6.19	-	280	turbid/brown	0	
935	1.0	15.0	14.8	6.17		360	turbid/brown	0	
942	1.0	17.5	14.5	6.39		340	turbid/brown	0	
954	1.0	20.0	14.8	6.45		580	turbid/brown	0	
1003	1.0	22.5	15.0	6.57		540	turbid/brown	0	
1011	1.0	25.0	15.6	6.64		540	turbid/brown	0	

COMMENTS/OBSERV	VATIONS:
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Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Date Started (yr/n	no/day) 90/8/22 Date Completed (yr/mo/day	90/8/23
Field Personnel _	Rob Enright, Richard Burdine	
Site Name	Medley Farm RI/FS - Phase II	
SEC Job #	G-8026	
Well ID #	SW1	
XUpgra	adientDowngradient	
Weather Conditio	ns Hazy to Partly Cloudy, Hot, Humid	
Air Temperature	21.5	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Depth to Ground Water (DGW) = Length of Water Column (LWC) = TWD - DGW = _	12.30	1/100 ft 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 =	2.00	gallons
5 Casing Volumes =	10.00	gallons
Method of Well Development Alternating		
Brainard-Kilman Hand Pump, and Teflo	n Bailer	
Total Volume of Water Removed	107.0	gallons

Date/Time 8/22/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1032	1.0	27.5	15.5	6.63		570	turbid/brown	0	
1043	1.0	30.0	15.8	6.36		540	turbid/ light brown	0	
1055	1.0	32.5	16.0	6.68		600	turbid/ light brown	0	
1104	1.0	35.0	15.2	6.78		580	turbid/ light brown	0	
1122	1.0	37.5	15.3	6.46		370	turbid/ light brown	0	
1135	1.0	40.0	15.8	6.76	-	250	turbid/tan	0	
1320	1.0	42.5	15.6	6.18		-	turbid/ light brown	0	
1357	1.0	45.0	14.4	-			turbid/tan	0	ph/cond . mete broken
1402	1.7	47.5	14.3	-			turbid//tan	0	
1405	0.5	50.0	14.4		1		turbid/tan	0	

COMMENTS/OBSERVATIONS: Development after removing 45.0 gallons was accomplished using turbidity /color and temperature as indicator parameters due to erroneous readings obtained from pH/conductivity meters.

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Date Started (yr/r	mo/day) 90/8/22 Date Completed (yr/mo/day) 90/8/23
Field Personnel _	Rob Enright, Richard Burdine
Site Name	Medley Farm RI/FS - Phase II
SEC Job#	G-8026
Well ID #	SW1
X Upgr	adientDowngradient
Weather Condition	Partly Cloudy, Hot, Humid
Air Temperature	19.8 ℃

Total Well Depth (TWD) =		61.80 TOC	1/100 ft
Depth to Ground Water (DGW) =		49.50 TOC	1/100 ft
Length of Water Column (LWC) = TW	/D - DGW =	12.30	1/100 ft
1 Casing Volume (OCV) = LWC x 0	 = .163	2.00	gallons
5 Casing Volumes ≈		10.00	gallons
Method of Well Development	Alternating	Surge Block,	
Brainard-Kilman Hand Pum	p, and Teflor	Baller	
Total Volume of Water Removed		107.0	gallons

Date/Time 8/22/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1432	1.0	52.5	16.0		••		turbid/tan	0	
1436	1.0	55.0	14.2				turbid/tan	0	
1452	1.0	57.5	14.5	-			turbid/tan	0	
1507	1.0	60.0	17.5		-	••	turbid/tan	0	
1531	1.0	62.5	14.5		-		turbid/tan		dry after pumping 0.4 gals.
1546	0.5	65.0	14.5	••		•-	turbid/tan	0	
1549	0.5	67.5	14.7				turbid/tan	0	
1558	0.5	70.0	14.7				turbid//tan	0	finished w/BK hand pump
8/23/90 0919	-	2.5	14.5				turbid/brown	0	using baller
0926		5.0				-	turbid/ light brown	0	

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COMMENTS/OBSERVATIONS:			 		
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Date Started (yr/m	no/day) 90/8/22 Date Completed (yr/mo/day) 90/8/23			
Field Personnel _	Rob Enright, Richard Burdine			
Site Name	Medley Farm RI/FS - Phase II			
SEC Job #	G-8026			
Well ID #	SW1			
X_Upgra	dientDowngradient			
Weather Conditio	ns Cloudy, Hot, Humid			
Air Temperature	19.0			

Total Well Depth (TWD) =	61.80 TOC	1/100 ft
Depth to Ground Water (DGW) =	49.50 TOC	1/100 ft
Length of Water Column (LWC) = TWD - DG	W = 12.30	1/100 ft
1 Casing Volume (OCV) = LWC x 0.163	2.00	gallons
5 Casing Volumes =	10.00	gallons
Method of Well Development Altern	nating Surge Block,	
Brainard-Kilman Hand Pump, and	Tefion Bailer	
Total Volume of Water Removed	107.0	gallons

Date/Time 8/23/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	pН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0933	-	7.5					turbid/ light brown	1	
0942	-	10.0	14.2				turbid/ light brown	1	
0950		12.5		-			turbid/ light brown	0	
0958		15.0			-	**	turbid/ light brown	0	
1005		17.5	-				turbid/ light brown	0	VII.
1012		20.0		-			turbid/ light brown	0	····
1020		22.5		-			turbid/ light brown	0	-
1032		25.0	14.7	-	-		turbid/ light brown	0	
1044		27.5		-	-		turbia/ light brown	0	
1052		30.0		-			turbid/ light brown	0	

COMMENTS/OBSERVATIONS:		 			
	 	 			

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Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Date Started (yr/n	no/day) 90/8/22 Date Completed (yr/mo/day) 90/8/23			
Field Personnel	Rob Enright, Richard Burdine			
Site Name	Medley Farm RI/FS - Phase II			
SEC Job#	G-8026			
Well ID #	SW1			
X Upgra	dientDowngradient			
Weather Condition	Cloudy, Hot, Humid			
Air Temperature	19.0			

Total Well Depth (TWD) =	61.80 TOC	1/100 ft
Depth to Ground Water (DGW) =	49.50 TOC	1/100 ft
Length of Water Column (LWC) = TWD - DGW	12.30	1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 =	2.00	gallons
5 Casing Volumes =	10.00	gallons
Method of Well Development Alterna		
Brainard-Kilman Hand Pump, and To	eflon Bailer	
Total Volume of Water Removed	107.0	gallons

Date/Time 8/23/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1100		32.5		-			turbid/ light brown	0	
1112		35.0	14.6				turbid/ light brown	0	-
1121		37.0	-				turbid/ light brown	0	
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COMMENTS/OBSERVATIONS:

Page 1 of 1

Date Started	(yr/mo/day) 89/7/11	Date Completed (yr/mo/day) 89/7/	1
Field Persor	nnel <u>M. WARD</u>		
Site Name _	MEDLEY FARM	GAFFNEY, SC	
SEC Job #_	G-8026		
Well ID #	SW-3		
x	UpgradientDowngr	adient	
Weather Co	nditions SUNNY	& HOT	
Air Tempera	iture	33	<u>°C</u>

Total Well Depth (TWD) =	77.00		тос	1/100 ft
Depth to Ground Water (DGW) =	68.71		тос	1/100 ft
Length of Water Column (LWC) = T	WD - DGW =	8.29		1/100 ft
1 Casing Volume (OCV) = LWC x	.163 =	1.35	·	gallons
5 Casing Volumes =		6.76		gallons
Method of Well Development	BRAINARD-	(ILMAN HAI	ND PUMP	
Total Volume of Water Removed			 6.5	gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1505		2.5	21.1	7.28		154	very slightly turbid	0	
1602		1.5	20.0	7.27		88	very slightly turbid	0	
1610		1.5	20.3	6.87		85	very slightly turbid	0	
1642		1.0	21.0	7.64		131	very slightly turbid	0	
			<u> </u>						
<u> </u>									· · · · · · · · · · · · · · · · · · ·

COMMENTS/OBSERVATIONS:				
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Page 1 of 1

Date Started (yr/mo/day) 89/7/27 Date Completed (yr/mo/day) 89/7/27	Total Well Depth (TWD) = 68.3 (TOC) 1/100 ft
Field Personnel R. J. HUNT	Depth to Ground Water (DGW) = 57.59 (TOC) 1/100 ft
Site Name MEDLEY FARMS GAFFNEY, SC	Length of Water Column (LWC) = TWD - DGW = 10.71 1/100 ft
SEC Job # G-8026	1 Casing Volume (OCV) = LWC x163 = 1.75 gallons
Well ID # SW-4	5 Casing Volumes = 8.73 gallons
X UpgradientDowngradient	Method of Well Development BRAINARD - KILMAN HAND PUMP
Weather Conditions OVERCAST, HUMID	
Air Temperature 32 ℃	Total Volume of Water Removed 10.0 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1030		1.0	23.7	6.51		187	slightly turbid	0	
1034		2.0	19.4	6.37		158	slightly turbid	0	
1041		3.0	18.7	6.30		126	slightly turbid	0	
1047		4.0	18,7	6.31		135	clear	0	
1056		5.0	18.7	6.32		130	clear	0	
1102		6.0	19.3	6.31		126	clear	0	
1115		7.0	18.8	6.30		128	clear	0	
1118		8.0	18.7	6.31		130	clear	0	
1137		9.0	18.8	6.31		128	clear	0	
1141		10.0	18.8	6.31		128	clear	o	

COMMENTS/OBSERVATIONS: Very low discharge. Development stopped at 10 gallons due to stability of parameters and lack of turbidity.	
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Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Date Started (yr/m	o/day) 90/9/6 Date Completed (yr/	mo/day) <u>90/9/6</u>
Field Personnel _	Rob Enright, Richard Burdine	
Site Name	Medley Farm RI/FS - Phase II	
SEC Job#	G-8026	
Well ID #	SW101	
Upgra	dient X_Downgradient	
Weather Condition	Clear, hot , humid	
Air Temperature	20.9	۰

Total Volume of Water Removed	46.5 (See Comments)	gallons
Method of Weil Development	on Baller	
5 Casing Volumes =	3.12	gallons
1 Casing Volume (OCV) = LWC x 0.163	0.62	gallons
Length of Water Column (LWC) = TWD - D	GW =	1/100 ft
Depth to Ground Water (DGW) =	33.02 TOC	1/100 ft
Total Well Depth (TWD) =	36.85 TOC	1/100 ft

Date/Time 9/6/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	pН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0822		0.5	16.8	6.67		170.3	turbid/light brown	2	
0836	-	1.0	16.7	6.60		166.5	slightly turbid/ light brown	1	
0843		1.5	16.4	6.50	**	162.4	siightly turbid/ light brown	1	
0848		2.0	16.0	6.49		155.5	slight turbid/ tan	1	
0853	-	2.5	16.3	6.55		157.8	slight turbid/ tan	1	
0857	-	3.0	16.2	6.63		161.2	slight turbid/ tan	1	
0902		3.5	16.4	6.63		157.3	silight turbid/ tan	1	
0907	<u></u>	4.0	16.3	6.65		156.5	slight turbid/ tan	1	
0912		4.5	16.4	6.63		159.1	slight turbid/ tan	1	
0917		5.0	16.3	6.67		158.1	slight turbid/ tan	1	·

COMMENTS/OBSERVATIONS: Approximately 40 gallons were bailed to remove the 25-30 gallons introduced during well installation prior to checking parameters.

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Page	_	01		

Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Date Started (yr/m	o/day)	Completed (yr/mo/day) 90/9/6
Field Personnel _	Rob Enright	
Site Name	Medley Farm RI/FS - Ph	ase II
SEC Job#	G-8026	
 Well ID #	SW101	
Upgra	dient X Downgradient	
Weather Condition	s Clear, hot , humid	
Air Temperature	20.9	•c

Depth to Ground Water (DGW) =	33.02 TOC	
Debut to atomic Mater (DOM) =	00.02 100	1/100 f
Length of Water Column (LWC) = TWD - DGW =	3.83	1/100 f
1 Casing Volume (OCV) = LWC x 0.163 =	0.62	galions
5 Casing Volumes =	3.12	gallons
Method of Well Development Teflon Ballo	er	

Date/Time 9/6/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0922	••	5.5	16.3	6.66		156.1	slightly turbid/ tan	1	
0928		6.0	16.8	6.67		151.8	slightly turbid/ tan	1	
0934	- -	6,5	16.4	6.65		152.4	slightly turbid/ tan	1	
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				<u> </u>					

COMMENTS/OBSERVATIONS:

Page	1	of	2
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Date Started (yr/n	no/day) 90/8/24 Date Completed (yr/mo/day)	90/8/27
Field Personnel _	Rob Enright, Richard Burdine	
Site Name	Medley Farm RI/FS - Phase II	
SEC Job#	G-8026	
Well ID#	SW102	
Upgra	adlent X Downgradient	
Weather Conditio	Partly Cloudy, Hot , Humid	
Air Temperature	34	°C

Total Well Depth (TWD) =		51.22 TOC	1/100 ft
Depth to Ground Water (DGW) =	_	39.95 TOC	1/100 ft
Length of Water Column (LWC) = 1	TWD - DGW =	11.27	1/100 ft
1 Casing Volume (OCV) = LWC x	0.163	1.84	gallons
5 Casing Volumes =		9.19	gallons
Method of Well Development	Brainard-Kill	man Hand Pump and	
	Teflon Balle	r	
Total Volume of Water Removed	63.5		gallons

Date/Time 8/24/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1145	••	10.0	-	-			very turbid/ brown	5	lot of silt
1525		17.5		-			very turbid/ brown	5	purged dry
1533		20.0				•••	very turbid/ brown	5	purged dry
1549	-	25.0	••	-			turbid/brown	3	purged dry
3/27/90 0721		5.0		-	-		very turbid/ brown	5	purged dry
0746	-	12.5		-			very turbid/ brown	3	purged dry
0800	. <u></u>	17.0					very turbid/ brown	3	purged dry
0817		22.5	••	-			very turbid/ brown	2	purged dry
0832		27.0					very turbid/	2	surged and purged dry
0908		36.0					very turbid/ brown	2	Surged and purged dry

COMMENTS/OBSERVATIONS:				 	

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Date Started (yr/m	o/day) 90/8/24 Date Completed (yr/mo/day) <u>908/27</u>
Field Personnel _	Rob Enright, Richard Burdine	·
Site Name	Medley Farm RI/FS - Phase II	
SEC Job#	G-8026	
Well ID #	SW102	
Upgra	dientXDowngradient	
Weather Condition	Partly Cloudy, Hot , Humid	
Air Temperature	34	લ

Total Volume of Water Removed 63.5		gallons
Teflon Ba	aller	
Method of Well DevelopmentBrainard	Kilman Hand Pump a	nd
5 Casing Volumes =	9.19	gallons
1 Casing Volume (OCV) = LWC x	1.84	gallons
Length of Water Column (LWC) = TWD - DGW	= 11.27	1/100 ft
Depth to Ground Water (DGW) =	39.95 TOC	1/100 ft
Total Well Depth (TWD) =	51.22 TOC	1/100 ft

Date/Time 8/27/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0925		42.0			••		turbid/light brown	2	purged dry
1000		47.5			••		turbid/light brown	2	surged and purged dry
1723		51.0	21.0	7.12	••	120	turbid/light brown	2	purged
1730		56.0	19.0	7.12		140	turbid/light brown	2	purged
1754		58.5	20.0	7.12		150	turbid/light brown	2	bailed
1800		61.0	19.0	7.22	-	140	turbid/light brown	2	bailed
1805		63.5	19.0	7.22		140	turbid/light brown	2	bailed
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COMMENTS/OBSERVATIONS:			 			
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Page	1	of	2	

Date Started (yr/n	no/day) 90/8/23 Date Completed (yr/	mo/day) <u>90/8/27</u>
Field Personnel _	Rob Enright, Richard Burdine	
Site Name	Medley Farm RI/FS - Phase II	
SEC Job #	G-8026	
Well ID #	SW103	
Upgr	ndient X Downgradient	
Weather Conditio	ns Sunny, Hot, and Humid	
Air Temperature	36	

Total Well Depth (TWD) =	47.28 TOC	1/100 ft
Depth to Ground Water (DGW) =	36.70 TOC	1/100 ft
Length of Water Column (LWC) = TWD - DG	w = 10.58	1/100 ft
1 Casing Volume (OCV) = LWC x 0.163	1.72	galions
5 Casing Volumes =	8.62	gallons
Method of Well Development <u>Alternating</u> Hand Pum	surge Block, Brainard- p and Teflon Baller	Kilman
Total Volume of Water Removed 50	0.0	gallons

Date/Time 8/23/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	pН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1525	-	3.0	20	6.33		90	very turbid/ brown	20	pumped dry
1640		7.0	18	6.52		70	very turbid/ brown	10	balled dry
0930		12.0	17.5	6.12	-	170	very turbia/ brown	5	bailed dry
1110		15.0	17.8	5.51	-	320	very turbid/ brown	5	balled dry
1450	-	30.0	17.5	5.98	1		turbid	0-5	bailed dry
1612		25.0	17.5	6.12	ı	-	turbid	0-5	balled dry
1700		30.0	17.5	6.15	-		turbid	0-5	bailed dry
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COMMENTS/OBSERVATIONS:	 	 	 		 	

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Date Started (yr/m	o/day) <u>90/8/23</u>	Date Completed (yr/mo/day)90/8/27
Field Personnel _	Rob Enright, Ri	chard Burdine
Site Name	Medley Farm RI	/FS - Phase II
SEC Job #	G-8026	
Well ID #	SW103	
Upgra	dient X Downgr	adlent
Weather Condition	ns Clear, Hot,	, Humld
Air Temperature		34

Total Volume of Water Removed	50.0	gallons
	ump and Tefion Bail	
Method of Well Development Alterna	ting Surge Block, Bi	rainard-Kilman
5 Casing Volumes =	8.62	gallons
1 Casing Volume (OCV) = LWC x0.10	53 =1.72	gallons
Length of Water Column (LWC) = TWD	DGW =10.58	8 <u>1/100 ft</u>
Depth to Ground Water (DGW) =	36.70 1	OC 1/100 ft
Total Well Depth (TWD) =	47.28 1	FOC 1/100 H

				Eh	(µmhos/cm)	Turbidity/Color	(%)	Remarks
	3.0	18.5	6.65	-	200	tirbod/light brown	2	bailed dry
••	9.5	18.2	6.49		80	brown tirbod/light brown	2	bailed dry
	11.5	18.5	6.20	-	200	turbid/tan	1	bailed dry
	14.0	18.7	6.25		170	turbid/tan	1	bailed dry
	16.0	18.7	6.37		170	turbid/tan	1	bailed dry
	20.0	19.0	6.42	-	180	turbid/tan	1	bailed dry
	 							
	<u> </u>	· · · · · · · · · · · · · · · · · · ·						
		11.5 14.0 16.0	11.5 18.5 14.0 18.7 16.0 18.7	11.5 18.5 6.20 14.0 18.7 6.25 16.0 18.7 6.37	11.5 18.5 6.20 14.0 18.7 6.25 16.0 18.7 6.37	11.5 18.5 6.20 200 14.0 18.7 6.25 170 16.0 18.7 6.37 170	11.5 18.5 6.20 200 turbid/tan 14.0 18.7 6.25 170 turbid/tan 16.0 18.7 6.37 170 turbid/tan	11.5 18.5 6.20 200 turbid/tan 1 14.0 18.7 6.25 170 turbid/tan 1 16.0 18.7 6.37 170 turbid/tan 1

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COMMENTS/OBSERVATIONS:	 		 	

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Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Date Started (yr/n	no/day)90/8/22Date Completed (yr/mo/day)90/8/28
Field Personnel _	Richard Burdine
Site Name	Medley Farm RI/FS - Phase II
SEC Job#	G-8026
Well ID #	SW104
Upgra	adient X Downgradient
Weather Conditio	ns Overcast, Warm and Breezy
Air Temperature	34 °c

	151	
Method of Well Development <u>Alternating Sur</u>	ge Block, Teflon Ba	iler
5 Casing Volumes =	12.57	gallons
1 Casing Volume (OCV) = LWC x 0.163 =	2.53	gallons
Length of Water Column (LWC) = TWD - DGW =	15.55	1/100 ft
Depth to Ground Water (DGW) =	21.84 TOC	1/100 H
Total Well Depth (TWD) =	37.39 TOC	1/100 ft

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	pН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
8/22/90 1600		16	18				very turbid/ brown	10	Bailed dry
8/23/90 1310		29	18.1			-	very turbid/ brown	5	Bailed dry
8/24/90 0950		47	17.6				very turbid/ brown	5	Balled dry
8/25/90 1610		68	17.3			-	very turbid/ brown	5	Bailed dry
8/27/90 1110	*	74	17.8				very turbia/ brown	5	Bailed dry
8/27/90 1450	=4	90	17.5		1	•••	very turbia/ brown	5	Balled dry
8/28/90 0810		110	17.4	7.40		*	very turbid/ brown	2.3	Bailed dry
0915		119	17.3	7.10	••		very turbid/ brown	0	Bailed dry
1050	***	136	17.4	6.92	**		very turbid/ hrown	0	Balled dry
1140		151	17.2	6.98		* ***	very turbid/ brown	0	Balled dry

COMMENTS/OBSERVATIONS:

* Specific conductivity meter was malfunctioning. Remove ~ 130 gallons introduced during well installation and then the additional 21.0 gallons for >5 borehole volumes.

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Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Date Started (yr/n	no/day) 90/9/11 Date Completed (yr/mo/day) 90/9/11
Field Personnel	Rob Enright, Richard Burdine
Site Name	Medley Farm Ri/FS - Phase II
SEC Job #	G-8026
Well ID #	SW106
Upgra	adlent X_Downgradient
Weather Condition	Partly Cloudy, Cool, Humid
Air Temperature	20.6 ℃

Total Volume of Water Removed 92.0		gallons
Method of Well Development <u>Brainard-Kiln</u> Bailer	nan Hand Pump and	1 etion
5 Casing Volumes =	11.37	gallons
1 Casing Volume (OCV) = LWC x 0.163 =	2.27	gallons
Length of Water Column (LWC) = TWD - DGW ≈	13.95	1/100 ft
Depth to Ground Water (DGW) =	10.26 TOC	1/100 ft
Total Well Depth (TWD) =	24.21 TOC	1/100 H

Date/Time , 9/11/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0815	-	10.0	16.7	6.81		103.1	turbid/light brown		BK hand pump, failed: using bail
0940		20.0	16.6	6.92		100.0	slightly turbid/ llaht tan	1	baller
1039		30.0	17.1	7.02		101.9	turbid/light brown	4	baller
1245		40.0	17.3	6.93		103.4	slightly turbid/ tan	2	baller
1331		50.0	17.5	6.96		102.8	turbid/tan	3	bailer
1424	_	60.0	17.5	6.92		104.9	slightly turbid/	2	bailer
1509		70.0	17.8	6.99		105.4	slightly turbid/ tan	1	bailer
1600		80.0	17.7	6.96		103.1	slightly turbid/	1	bailer
1610	0.5	82.0	17.3	6.82		100.3	slightly turbid/	1	bailer
1619	0.5	84.0	17.3	6.63		101.1	slightly turbid/	1	bailer

COMMENTS/OBSERVATIONS: 80 gals. of water introduced during drilling of hole and setting of well.

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Date Started (yr	/mo/day) 90/9/11 Date Completed (yr/mo/day) 90/9/11					
Field Personnel	Rob Enright, Richard Burdine					
Site Name	Medley Farm RI/FS - Phase II					
SEC Job #	G-8026					
Well ID #	SW106					
Upg	UpgradientX_Downgradient					
Weather Conditions Clear, Sunny, Hot, Humid						
Air Temperature	24.3 ℃					

Total Well Depth (TWD) =	24,21 TOC	1/100 ft
Depth to Ground Water (DGW) =	10.26 TOC	1/100 ft
Length of Water Column (LWC) = TWD - DG	iw = 13.95	1/100 ft
1 Casing Volume (OCV) = LWC x 0.163	= 2.27	galions
5 Casing Volumes =	11.37	gallons
Method of Well Development <u>Brainard</u> Baller	-Kilman Hand Pump and	Teflon
Total Volume of Water Removed 9	2.0	gallons

Date/Time 9/11/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1628	0.5	86.0	17.6	6.83		1 707 6	slightly turbid/ tan	1	baller
1639	0.5	88.0	17.4	6.80		100.2	slightly turbid/ tan	1	bailer
1647	0.5	90.0	17.1	6.65		101.9	slightly turbid/	1	bailer
1657	0.5	92.0	17.2	6.79	••	101.0	slightly turbid/ tan	1	bailer
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COMMENTS/OBSERVATIONS:	· .

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Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Date Started (yr/m	o/day) 90/9/5 Date Completed (yr/mo/	(day) <u>90/9/24</u>
Field Personnel	Rob Enright, Joe Harrigan, Kevin Degr	oot (AT&E)
Site Name	Medley Farm RI/FS - Phase II	
SEC Job#	G-8026	
Well ID #	SW108	
Upgra	dient X_Downgradient	
Weather Condition	Cuppy Hot Humld	
Air Temperature_	31.0	<u> </u>

Total Well Depth (TWD) =	21.62 TOC	1/100 ft
Depth to Ground Water (DGW) =	7.86 TOC	1/100 ft
Length of Water Column (LWC) = TWD - DGW =	13.76	1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 =	2.24	gallons
5 Casing Volumes =	11.21	galions
Method of Well Development Brainard-Kilr Bailer	nan Hand Pump and	Teflon
Total Volume of Water Removed 33.0		gallons

Date/Time 9/5/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1510	0.5	2.0				-	turbid/light brown	10	BK Hand Pump broke
1630		3.5					turbid/light brown	10	using baller, balled dry
1645		4.0					turbid/light brown	10	bailed dry
1712		4.5			•		turbid/light brown	10	bailed dry
1730		5.0					turbid/light brown	10	bailed dry
1744		5.3		-			turbid/light brown	10	balled dry
0800		7.0					slightly turbid	10-20	balled dry
0840		7.5	••				slightly turbid	5	bailed dry
1009		8.0	••				slightly turbid	3	bailed dry
1042		8.3	44				slightly turbid	3	bailed dry

COMMENTS/OBSERVATIONS: BK Hand Pump sealed shut. Slity sand in bottom of bucket after first 6 gallons; appears to be a mixture of filter pack and formation. Slit sediment is sticky and rolls into 3/8 in. roll when wet. Appears similar to cuttings from BW108,

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Date Started (yr/n	no/day) 90/9/5 Date Completed (yr/mo/day) 90/9/	24
Field Personnel _	Rob Enright, Joe Harrigan, Kevin Degroot (AT&E)	
Site Name	Medley Farm RI/FS - Phase II	
SEC Job#	G-8026	
Well ID #	SW108	
Upgra	adient <u>X</u> Downgradient	
Weather Condition	Sunny, Hot, Humid	
Air Temperature	31.0	<u>°C</u>

Total Well Depth (TWD) =		21.62 TOC	1/100 ft
Depth to Ground Water (DGW) =		7.86 TOC	1/100 ft
Length of Water Column (LWC) = TWD	- DGW =	13.76	1/100 ft
1 Casing Volume (OCV) = LWC x0.1	63 =	2.24	gallons
5 Casing Volumes =		11.21	gallons
Method of Well Development <u>Brair</u> Baile		n Hand Pump and	Teflon
Total Volume of Water Removed	33.0		gallons

Date/Time 9/6/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1200	0.5	9.0			••		slightly turbid	3	bailed dry
1300		10.0	••			-	slightly turbid	3	balled dry
1535		11.0		-			slightly turbid	3	balled dry
1645		11.5					slightly turbid	2	balled dry
1820		12.0					silghtly turbid	2	bailed dry
9/7/90	••	15.0					slightly turbid	2	balled dry
9/10/0935		16.8				-	slightly turbid	2	bailed dry
1745		19.3				-	slightly turbid	2	bailed dry
9/11/0710		21.5				-	slightly turbid	2	bailed dry
9/12/0924		23.5					slightly turbid	2	balled dry

COMMENTS/OBSERVATIONS:		 	_

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Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Date Started (yr/r	no/day) 90/9/21 Date Completed (yr/mo/day)	90/9/24
Field Personnel	Joey Gillespie, John Haramut	
Site Name	Medley Farm RI/FS - Phase II	
SEC Job#	G-8026	
Well ID #	SW108	
Upgra	adient X_Downgradient	
Weather Condition	ns Partly Cloudy and Warm	
Air Temperature	32	℃

Method of Well Development Brainard-Kl Bailer	lman Hand Pump and	18110N
5 Casing Volumes =	11.21	gallons
1 Casing Volume (OCV) = LWC x 0.163 =		gallons
Length of Water Column (LWC) = TWD - DGW	= 13.76	1/100 ft
Depth to Ground Water (DGW) =	7.86 TOC	1/100 ft
Total Well Depth (TWD) =	21.62 TOC	1/100 ft

Date/Time 9/21/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1216		26.5	14.0	9.15	-	908	slight/tan		balled dry
1243	••	27.0	14.0	9.18		1072	slight/tan		balled dry
9/24/1103		27.2	13.0	6.83		100.5	clear	0	first bailer
1114		29.5	13.5	6.93		86.6	moderate/ light brown	1	balled dry
1409		32.0	14.0	8.82		89.3	moderate/ brown	3	at ~ 2.5 gal bailed dfy at
1539		33.0	14.0	8.78	-	81.3	slight/light brown	1	5.0 gal balled dry at ~ 6.0 gal
									final sample
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COMMENTS/OBSERVATIONS: A total of 30 gallons was removed prior to measuring parameters to remove the quantity introduced during well installation.

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Date Started (yr/m	no/day) 90/9/25 Date Completed (yr/mo/day) 90/9/25
Field Personnel _	John Haramut
Site Name	Medley Farm RI/FS - Phase II
SEC Job#	G-8026
Well ID #	SW109
Upgra	idlent X_Downgradient
Weather Condition	ns Clear, Cool
Air Temperature	10-30

Total Volume of Water Removed 78.0		gallons
Method of Well Development <u>Brainard-Kili</u> with bailer, 1	nan Hand Pump, sur efion Bailer	ging
5 Casing Volumes =	7.92	gallons
1 Casing Volume (OCV) = LWC x 0.163 =	1.58	gallons
Length of Water Column (LWC) = TWD - DGW =	9.72	1/100 ft
Depth to Ground Water (DGW) =	52.89 TOC	1/100 ft
Total Well Depth (TWD) =	62.61 TOC	1/100 ft

Date/Time 9/25/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0851	0.25	5	9.5	7.85		157.1	very/brown	5	
0909	0.28	10	11	7.31		122.9	very/brown	5	
0922	0.38	15	11.5	7.10		111.1	very/brown	3-5	
1016	0.40	20	12	7.07		104.8	very/brown	3	
1029	0.38	25	12	7.00		91.5	very/brown	1-3	
1043	0.36	30	12	6.92		87.7	very/brown	1-3	see commen
1105	0.36	38	12	6.87		84.7	very/brown	1-3	
1409	0.35	43	NA	6.97		112.2	very/brown	1-3	surging with baller
1426	0.29	48	NA	6.89		93.9	very/brown	1-3	surging with
1456	0.36	53	NA	6.84		94.6	very/brown	<1	surging with baller

COMMENTS/OBSERVATIONS:	Approximately 30 gallons is equal to the amount of water introduced into the borehole during well installation.
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Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Date Started (yr/	no/day) 90/9/25 Date Completed (yr/mo/day) 90/9/25
Field Personnel	John Haramut
Site Name	Medley Farm RI/FS - Phase II
SEC Job#	G-8026
Well ID #	SW109
Upgr	adient X_Downgradient
	ons Clear, Cool
Air Temperature	10-30°C

Total Well Depth (TWD) =	62.61 TOC	1/100 ft
Depth to Ground Water (DGW) =	52.89 TOC	1/100 ft
Length of Water Column (LWC) = TWD - DGN	N = 9.72	1/100 ft
1 Casing Volume (OCV) = LWC x0.163	= 1.58	gallons
5 Casing Volumes =	7.92	gallons
	Kilman Hand Pump, su er, Tefion Baller	rging
Total Volume of Water Removed78	.0	gallons

Date/Time 9/25/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1516	0.25	58	NA	6.80		88.2	moderate/ llght brown	3-5	surging with baller
1559	0.32	63	NA	6.87		105.0	moderate/ light brown	3	surging with baller
1612	0.38	68	NA	6.79		84.4	moderate/ light brown	1-3	surging with bailer
1711	0.38	73	NA	6.86		84.4	moderate/ light brown	1	surging with baller
1724	0.32	78	NA	6.96		91.6	moderate/ light brown	1	surging with baller
									
								 	
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COMMENTS/OBSERVATIONS:

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Date Started	(yr/mo/day) 89/7/6	Date Completed (yr/mo/day)	39/7/6
Field Person	inel M. WARD		<u>-</u>
Site Name	MEDLEY FARMS	GAFFNEY, SC	
SEC Job #_	G-8026		
Well ID #	BW-1		
<u> x</u>	UpgradientDowng	radient	
Weather Cor	nditions OVERC	AST	
Air Tempera	turė		26.5 e

Total Well Depth (TWD) =	96.5	тос	1/100 ft
Depth to Ground Water (DGW) =	51.16	тос	1/100 ft
Length of Water Column (LWC) =	TWD - DGW = _	45.38	1/100 ft
1 Casing Volume (OCV) = LWC x_	.653=_	29.61	gallons
5 Casing Volumes ≈		148.05	gallons
Method of Well Development	GRUNDFOS	SUBMERSIBLE PUMI	
Total Volume of Water Removed	- · · · · · · · · · · · · · · · · · · ·	1054.30	gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1355	7.5	147.7	18.1	6.62		99	clear	0	
1408	7.6	245.4	17.2	6.50		80	clear	0	
1430	8.0	421.4	17.9	6.43		89	clear	0	water level: 58.50 ft.
1441	5.1	477.4	18.0	6.30		89	clear	0	water level: 58.82 ft.
1454	7.6	576.4	18.0	6.12		89	clear	0	
1508	8.3	692,4	17.9	5.95		87	clear	0	water level: 59.00 ft.
1518	6.7	759.4	17.9	6.03		85	clear	0	
1530	7.0	843.4	17.8	6.06		85	clear	0	
1537	7.1	893,4	17.7	5.96		83	clear	0	water level: 59.32 ft.
1551	7.1	992.4	17.9	5.60		84	clear	О	<u> </u>

COMMENTS/OBSERVATIONS:	Pump set at 80 ft.	Totalizer=37154.6 g	allons when pump started

Page 2 of 2

Date Started (yr/mo/day) 89/7/6 Date Completed (yr/mo/day) 89/7/6	Total Well Depth (TWD) = 96.5	тос	1/100
Field Personnel M. WARD	Depth to Ground Water (DGW) = 51	.16 TOC	1/100
Site Name MEDLEY FARMS GAFFNEY, SC	Length of Water Column (LWC) ≈ TWD - D	GW = 45.38	1/100
SEC Job # G-8026	1 Casing Volume (OCV) = LWC x653	_=29.61	gallor
Well ID # BW-1	5 Casing Volumes =	148.05	gallor
X UpgradientDowngradient	Method of Well Development GRUN	IDFOS SUBMERSIBLE PUM	Р
Weather Conditions OVERCAST			
Air Temperature 26.5 ℃	Total Volume of Water Removed	1054.30	gallor

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbldity/Color	Sand Content (%)	Remarks
1558	7.0	1041.4	17.8	6.00		83	clear	0	
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COMMENTS/OBSERVATIONS:	Totalizer=38208.9 gallons when pump started.				
		 	 	 	_

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Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Date Started	(yr/mo/day) 89/8/3	Date Completed (yr/mo/day)8	9/8/3
Field Person	nel <u>D. DETWILE</u>	R	
Site Name _	MEDLEY FARMS	GAFFNEY, SC	
SEC Job #_	G-8026		·····
Well ID#	BW-2		
	Jpgradient X Downg	radient	
Weather Cor	ditions CLEAR		
Air Tempera	ture	<u></u>	21 ℃

Total Well Depth (TWD) =	85,00	тос	1/100 ft
Depth to Ground Water (DGW) =	65.01	тос	1/100 ft
Length of Water Column (LWC) = T	WD - DGW =	19.99	1/100 ft
1 Casing Volume (OCV) = LWC x	.163=	13.03	gallons
5 Casing Volumes =	<u></u>	65.17	gallons
Method of Well Development	SUBMERSIB	LE BLADDER PUMP	
Total Volume of Water Removed		530	gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0700	.90	10	17.3	7.92		124	clear	0	
0747	,90	25	17.3	6.97		69	clear	0	
0813	.90	50	17.4	6.60		67	clear	0	
1202	.90	55	17.9	7.66	ļ 	79	clear	0	
1233	.90	85	17.5	6.29		66	clear	0	
1249	.90	100	18.0	6.14		66	clear	0	
1259	.90	110	18.4	6.15		64	clear	0	
1320	.90	125	18.4	6.01		66	clear	0	
1418	.90	175	18.8	6.64		71	clear	0	
1456	.90	200	18.4	5.96		68	clear	0	

COMMENTS/OBSERVATIONS:

Page 2 of 3

Date Started	(yr/mo/day) 89/8/3	Date Completed (yr/mo/day)	89/8/3	
Field Person	nel <u>D. DETWILER</u>			_
Site Name	MEDLEY FARMS	GAFFNEY, SC		_
SEC Job #_	G-8026			
Well ID #	BW-2			_
	Jpgradient X Downgra	dient		
Weather Co	nditions CLEAR			
Air Tempera	ture		35 °	<u>c</u>

Total Well Depth (TWD) =	85.00	тос	1/100 ft
Depth to Ground Water (DGW) = _	65.01	тос	1/100 ft
Length of Water Column (LWC) = 1	rwD - DGW = _	19.99	1/100 ft
1 Casing Volume (OCV) = LWC x	.163=_	13.03	gallons
5 Casing Volumes =		65.17	gallons
Method of Well Development	SUBMERSIB	LE BLADDER PUMP	
	··· • • • • • • • • • • • • • • • • • •		
Total Volume of Water Removed _		550	gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1518	.90	225	18.6	5.9		65	clear	0	
1602	.90	250	18.4	6.04		70	clear	0	
1626	.90	275	18.7	6.16		65	clear	0	
1719	.90	300	18.9	6.01		69	clear	0	
1751	.90	350	18.7	5.92		86	clear	0	
1828	.90	400	18.1	5.83		69	clear	0	
1910	.90	425	18.5	6.51		69	clear	0	
1933	.90	450	19.0	5.94		68	clear	0	
2015	.90	475	18.4	5.96		69	clear	0	
2043	.90	500	18.6	6.13		67 ·	clear	0	

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Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Date Started	(yr/mo/day) <u>89/8/3</u>	Date Completed (yr/mo/day) 89/8/3	
Field Persor	nnei <u>D. DETWILER</u>		
Site Name _	MEDLEY FARMS	GAFFNEY, SC	
SEC Job #_	G-8026		
Well ID #	BW-2	•	
	Upgradient X_Downgra	adient	
Weather Co	nditions CLEAR		
Air Tempera	iture	29.5	۰

COMMENTS/OBSERVATIONS:

Total Well Depth (TWD) =	85.00	тос	1/100 ft
Depth to Ground Water (DGW) =	65.01	тос	1/100 ft
Length of Water Column (LWC) = T	WD - DGW = _	19.99	1/100 ft
1 Casing Volume (OCV) = LWC x	.163=_	13.03	gallons
5 Casing Volumes =		65.17	gallons
Method of Well Development	SUBMERSIB	LE BLADDER PUMP	
Total Volume of Water Removed		550	gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
2130	.90	525	18.4	5.93		69	clear	0	
2113	.90	550	18.9	6.01		66	clear	0	
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Date Started (yr/mo/day) 89/8/1 Date Completed (y	r/mo/day) 89/8/1
Field Personnel R. J. HUNT	
Site Name MEDLEY FARMS	GAFFNEY, SC
SEC Job # G-8026	
Well ID # BW-3	· · · · · · · · · · · · · · · · · · ·
Upgradient XDowngradient	
Weather Conditions OVERCAST, HUMID	<u>.</u>
Air Temperature	33 ℃

Total Well Depth (TWD) =	55.0	(TOC)	1/100 ft				
Depth to Ground Water (DGW) =	4.97	(TOC)	1/100 ft				
Length of Water Column (LWC) = T	wD - DGW =	50.03	1/100 ft				
1 Casing Volume (OCV) = LWC x	653=_	32.67	gallons				
5 Casing Volumes ≈		163.35	gallons				
Method of Well Development GRUNDFOS SUBMERSIBLE PUMP							
			 				
Total Volume of Water Removed		1131.2	gallons				

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1430									meter reading: 41464.0 gals.
1440	6.50	65.0	17.5	7.81		178	clear	0	
1450	3.47	99.7	17.1	7.66		140	clear	0	
1500	5.51	154.8	17.2	7.47		141	clear	0	·
1520	5.44	263.6	17.0	7.38		129	clear	0	
1533	5.27	331.7	<u></u>				· 	<u></u>	generator out of gas
1650	4.80	672.0	17.0	7.18		134	clear	0	
1710	5.42	780.4	17.0	7.22		128	clear	0	
1815	5.40	1131.2	17.0	7.25		126	clear	0	meter reading: 42595.2 gals.
								ŀ	

COMMENTS/OBSERVATIONS:	 		 	

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Date Started	(yr/mo/day) 89/7/27 Date Completed (yr/mo/day) 89/8/1	Total
Field Persor	net R. J. HUNT	Dept
Site Name _	MEDLEY FARMS GAFFNEY, SC	Leng
SEC Job #_	G-8026	1 Cas
Well ID #	BW-4	5 Ca
	Upgradient X Downgradient	Meth
Weather Co	nditions OVERCAST, HUMID	
Air Tempera	ture	Total

Total Well Depth (TWD) =	31.0	(TOC)	1/100 ft
Depth to Ground Water (DGW) = _	3.43	(TOC)	1/100 ft
Length of Water Column (LWC) = 1	rwd - dgw = _	27.57	1/100 ft
1 Casing Volume (OCV) = LWC x _	<u>.653</u> =	18.0	galions
5 Casing Volumes =		90.0	gallons
Method of Well Development	GRUNDFOS	SUBMERSIBLE PUI	МР
Total Volume of Water Removed		202.9	gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
7/27/89 1410	-								meter reading: 577.0 gals.
1414	2.5	10.0	19.3	8.18		260	clear	0	
1422	1.2	20.0	18.9	8.31		230	clear	0	
1430	1.2	30.0	18.6	7.83		236	clear	0	
1445	1.2	48.0	19.0	7.80		240	clear	0	
1504	1.0	67.0	18.6	7.82		242	clear	0	
1514	1,2	79.0	18.1	7.72		236	clear	0	
8/1/89 1030				<u> </u>					meter reading: 41340.1 gals.
1049		11.2	18.2	7.68		225	clear	0	

COMMENTS/OBSERVATIONS:	·····

Page	2	of	2
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Date Started (yr/mo/day) 89/7/27 Date Completed (yr/mo/day) 89/8/1	Total Well Depth (TWD) = 31.0 (TOC)	1/100 ft
Field Personnel R. J. HUNT	Depth to Ground Water (DGW) = 3,43 (TOC)	1/100 ft
Site Name MEDLEY FARMS GAFFNEY, SC	Length of Water Column (LWC) = TWD - DGW = 27.57	1/100 ft
SEC Job # G-8026	1 Casing Volume (OCV) = LWC x653 _ =18.0	galions
Well ID#BW-4	5 Casing Volumes = 90.0	gallons
Upgradient X_Downgradient	Method of Well Development GRUNDFOS SUBMERSIBLE PUM	P
Weather Conditions OVERCAST, HUMID		***************************************
Air Temperature 32 ℃	Total Volume of Water Removed 202.9	gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	pН	Eh	Specific Conductivity (μmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
8/1/89 1100	1,28	25.3	18.0	7.67		226	clear	0	
1110	1.31	38.3	18.0	7.63		228	clear	0	
1130	1.26	63.5	17.8	7.61		232	clear	0	
1150	1.22	87.8	17.9	7.63		236	clear	0	
1210	1.21	111.9	17.8	7.65		234	clear	0	
1220	1.20	123.9	18.0	7.58		238	clear	0	meter reading: 41464.0 gals.
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COMMENTS/OBSERVATIONS:		
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Date Started (yr/i	mo/day) 90/10/8 Date Completed (yr/mo/day) 90/10/11					
Field Personnel	Joey Gillespie, Richard Burdine					
Site Name	Medley Farm RI/FS - Phase II					
SEC Job#	G-8026					
Well ID #	BW105					
Upgr	adlent X_Downgradient					
Weather Conditions Clear, Hot						
Air Temperature	26.7-29.4 ℃					

Total Well Depth (TWD) =	110.00 TOC	1/100 f
Depth to Ground Water (DGW) =	56.00 TOC	1/100 f
Length of Water Column (LWC) = TWD - DGW =	54.00	1/100 f
1 Casing Volume (OCV) = LWC x0.67 _=	36.18	gallons
5 Casing Volumes =	180.90	gallons
Method of Weil DevelopmentISCO Bladde	er Pump	
	7 1 3 11 19	
Total Volume of Water Removed 192.0		gallons

Date/Time 10/8/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1503	1.0	20.0	18-19	11.33		752	clear		
1556	0.1	25.0	18-19	11.13		429	cloudy/grout color		
1631	0.1	30.0	18-19	10.54		272	cloudy/clear		
1650	0.2	35.0	18-19	10.28		258	cloudy		
0/9/0753		40.0	18-19	9.80		208	cloudy		
0804	0.5	45.0	18-19	9.90		207	cloudy		
0823	0.3	50.0	18-19	10.04		202	clear		pumped dry
0850	0.2	55.0	18-19	9.79		205	clear		pumped dry
0935	0.1	60.0	18-19	9.56		202	clear		pumped dry
1011	0.1	65.0	18-19	9.54		208	clear		pumped dry

COMMENTS/OBSERVATIONS:	 	 	

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Date Started (yr/	/mo/day) 90/10/8 Date Completed (yr/mo/day) 90)/10/11
Field Personnel	Joey Gillespie, Richard Burdine	
Site Name	Medley Farm Ri/FS - Phase II	
SEC Job #	G-8026	
Well ID #	BW105	
Upgr	radient X Downgradient	
Air Temperature		<u></u>

Total Well Depth (TWD) =	110.00 TOC	1/100 ft
Depth to Ground Water (DGW) =	56.00 TOC	1/100 ft
Length of Water Column (LWC) = TWD - DGW =	54.00	1/100 ft
1 Casing Volume (OCV) = LWC x 0.67 =	36.18	gallons
5 Casing Volumes =	180.90	gallons
Method of Well DevelopmentISCO Bladde	r Pump	
		gallons

Date/Time 10/9/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1025	0.4	70.0	18-19	10.04		234	clear		
1107	0.4	75.0	18-19	9.30		210	clear	••	
1311		80.0	18-19	9.03		203	clear	-	
1328	0.3	85.0	18-19	8.99		197.5	clear	1	erroneous conductivity/readir
1343	0.3	90.0	18-19	9.58		208	clear		
1359	0.3	95.0	18-19	9.22		205	clear		
1425	0.2	100.0	18-19	9.27		211	clear		
1623	0.1	110.0	18-19	9.58		222	slightly turbid	-	
10/10/0950		120.0	18-19	8.92	•-	205	slightly turbid		
1057	0.2	135.0	18-19	8.63		179.6	slightly turbid		

COMMENTS/OBSER		 	 	 	

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Date Started (yr/s	no/day) 90/10/8 Date Completed (yr/mo/day) 90/10/11				
Field Personnel	Joey Gillespie, Richard Burdine				
Site Name	Medley Farm RI/FS - Phase II				
SEC Job#	G-8026				
Well ID #	BW105				
Upgr	adient X Downgradient				
Weather Conditions Clear, Hot					
Air Temperature	26.7-29.4 ℃				

Depth to Ground Water (DGW) =	56.00 TOC	1/100 ft
Length of Water Column (LWC) = TWD - DGW = _	54.00	1/100 ft
1 Casing Volume (OCV) = LWC x 0.67 =	36.18	gallons
5 Casing Volumes =	180.90	gallons
Method of Well DevelopmentISCO Bladder I	Pump	

Date/Time 10/10/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1130	0.2	140.0	18-19	8.43		177.2	slightly turbid		
1151	0.2	145.0	18-19	9.12		186.8	slightly turbid		
1415		150.0	18-19	7.97		183.2	clear		
1514	0.1	155.0	18-19	7.43		179.0	clear		
10/11/0817		160.0	18-19	6.96		167.3	clear		
0822	1.0	165.0	18-19	7.23		166.4	clear		
0838	0.3	170.0	18-19	8.40		177.3	clear		
0853	0.2	173.0	18-19	8.97		184.1	clear		
0913	0.4	178.0	18-19	7.84		175.5	clear		
0921	0.3	180.0	18-19	7.55		168.0	clear		pumped dr

COMMENTS/OBSERVATIONS:		
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Date Started (yr/n	no/day) 90/10/8 Date Completed (yr/mo/day) 90/10/11							
Field Personnel	onnel Joey Gillespie, Richard Burdine							
Site Name	Medley Farm RI/FS - Phase II							
SEC Job#	G-8026							
Well ID #	BW105							
X Upgra	adlentDowngradient							
Weather Conditions Clear, Hot								
Air Temperature	26.7-29.4 ℃							

Total Well Depth (TWD) =	110.00 TOC	1/100 ft
Depth to Ground Water (DGW) =	56.00 TOC	1/100 ft
Length of Water Column (LWC) = TWD - DGW =	54.00	1/100 ft
1 Casing Volume (OCV) = LWC x0.67 =	36.18	gallons
5 Casing Volumes =	180.90	gallons
Method of Well DevelopmentISCO Bladder I	Pump	
Total Volume of Water Removed 192.0		gallons

Date/Time 10/11/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0945	0.1	182.0	18-19	8.58		185.3	clear		
0950	0.6	185.0	18-19	7.45		155.7	clear		
0956	0.5	188.0	18-19	7.14		163.9	clear]	
1000	0.5	190.0	18-19	7.10		155.7	clear		
1004	0.5	192.0	18-19	7.02		159.6	clear		last reading
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COMMENTS/OBSERVATIONS:	 		 	
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Date Started (yr/n	no/day) 90/9/27	Date Completed (yr/mo/day)90/9/27	
Field Personnel	Joey Gillesple		
Site Name	Medley Farm RI	/FS - Phase II	
SEC Job#	G-8026		
Well ID #	BW106	· · · · · · · · · · · · · · · · · · ·	
Upgra	adient X Downgro	edient	
Weather Conditio	ns Clear		
Air Temperature		15.0	<u>°C</u>

Total Well Depth (TWD) =	80.60 TOC	1/100 ft
Depth to Ground Water (DGW) =	+3.00 Artesion Flow	1/100 ft
Length of Water Column (LWC) = TWD - DO	GW = 83.60	1/100 ft
1 Casing Volume (OCV) = LWC x 2.12	= 177.23	gallons
5 Casing Volumes =	886.16	gallons
Method of Well Development Submers	sible Pump & Flow Meter	
Total Volume of Water Removed 9	40	gallons

Date/Time 9/27/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0800			14-15	6.45		114.9	slight/clear		
0818	10.0	180	14.7	6.85		94.9	slight/clear		
0837	9.5	360	13.6	6.73		101.4	slight/clear		
0859	9.5	568	14.2	6.92		91.9	slight/clear		
0919	9.6	760	14.9	6.73		95.2	clearing		
0937	10.0	940	16.2	6.81		103.0	clearing		
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COMMENTS/OBSERVATIONS:

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Date Started (yr/n	no/day) 90/9/21 Date Completed (yr/mo/day) 90/9/24
Field Personnei	Joey Gillespie, John Haramut
Site Name	Mediey Farm RI/FS - Phase II
SEC Job #	G-8026
Well ID #	BW108
Upgra	edient <u>X</u> Downgradient
Weather Conditio	Partly Cloudy, and Warm
Air Temperature	32 ℃

0.163	(LWC) = TWD - DGW = 91.99 1/100 ft LWC x 0.163 = 61.63 gallons
1 Casing Values (OCV) - LWC = 0.163 - 61.63	LWC x gallons
1 Casing Volume (CCV) = LWCX = C1.00 gain	308.17 gallons
5 Casing Volumes = 308.17 gall	
5 Casing Volumes = 308.17 gall Method of Well Development <u>Grundfos Submersible Pump</u>	ent Grundfos Submersible Pump

Date/Time 9/21/90	Discharge Rate (gpm)	Volume Purged (galions)	Water Temperature (°C)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1140	2.0	53	16.0	12.00		146.0	clear		
1210	2.0	57	16.0	11.60		676	clear		
1219	2.0	73	16.0	11.39		445	clear		
1237	2.0	93	16.0	11.31		370	clear		
1238	4.5	109	16.0	11.62		702	clear		
1246	4.5	137	16.0	11.36		373	clear		
1253	3.5	171	15.0	11.01		274	clear		
1304	3.5	191	15.0	10.45		215	clear		
9/24/1346	2.0	297.2	13.5	10.68	1	200.9	clear	0	
1418	2.1	360.9	14.0	10.30		171.6	clear	0	

COMMENTS/OBSERVATIONS:	 		 	 		
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Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Date Started (yr/	mo/day) 90/9/21 Date Completed ()	yr/mo/day) <u>90/9/24</u>
Field Personnel	Joey Gillespie, John Haramut	
Site Name	Medley Farm RI/FS - Phase II	
SEC Job#	G-8026	
Well ID #	BW108	
Upg	radient X_Downgradient	
Weather Conditi	ons Clear, Cool	-
Air Temperature	32	ဇ

Method of Well Development Grundfos Subn	nersible Pump	
5 Casing Volumes =	308.17	gallons
1 Casing Volume (OCV) = LWC x =	61.63	gallons
Length of Water Column (LWC) = TWD - DGW =	91.99	1/100 ft
Depth to Ground Water (DGW) =	4.40 TOC	1/100 ft
Total Well Depth (TWD) =	96.39 TOC	1/100 ft

Date/Time 9/24/90	Discharge Rate (gpm)	Volume Purged (gailons)	Water Temperature (℃)	pН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1447	2.18	421.8	14.0	10.19		173.5	clear	0	particulate matte in suspension
1517	2.09	482.7	14.0	10.02		166.5	clear	0	Ì
1547	2.01	543.6	14.0	9.82		160.1	clear	0	
1618	2.01	604.5	14.0	9.95		167.2	clear	0	final sample
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COMMENTS/OBSERVATIONS: Overpumped well after final sample taken. Total volume purged is 622.9 gallons.

Page	1	of	3	
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Date Started (yr/n	no/day) 90/10/3 Date Completed (yr/mo/day) 90/10/3					
Field Personnel	Joey Gillespie, Richard Burdine					
Site Name	ite Name Medley Farm RI/FS - Phase II					
SEC Job #	G-8026					
Well ID#	BW109					
Upgra	odient X Downgradient					
Weather Condition	ns Partly Cloudy					
Air Temperature	18.3-21.1 ℃					

52.40 TOC	1/100 ft
39.92	1/100 ft
26.75	gallons
133.73	gallons
	26.75

Date/Time 10/3/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0942	1.0	5.0	18.0	11.33		523.0	clear		pump turned on
0954	1.2	20.0	18.0	10.25		207.8	clear		
0959	1.2	26.0	18.0				clear	••	
1005	1.3	34.0	18.0	9.02	-	135.4	clear	••	
1023	1.4	56.0	18.0	8.45		117.4	clear		
1042	1.9	91.5	18.0	8.18		124.6	clear		
1100	2.4	134.0	18.0	8.03		108.1	clear		
1152	2.4	256.5	18.0	7.91		106.8	clear		
1228	2.5	347.0	18.0	7.94		100.7	clear		
1234	2.5	362.0	18.0	-		·	clear		pump turned off

COMMEN	TS/OBSE	RVATIONS:
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Page 2 of 3

Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Date Started (yr/	no/day) 90/10/3 Date Completed (yr/mo/day) 90/10/3
Field Personnel	Joey Gillespie, Richard Burdine
Site Name	Medley Farm RI/FS - Phase II
SEC Job#	G-8026
Well ID #	BW109
Upgi	adlent X Downgradient
Weather Condition	ns Clear
Air Temperature	18.3-21.1 ℃

Total Volume of Water Removed 794.5		gallons
Method of Well Development <u>Grundfos Subm</u>	nersible Pump	
5 Casing Volumes =	133.73	gallons
1 Casing Volume (OCV) = LWC x	26.75	gallons
Length of Water Column (LWC) = TWD - DGW ≈	39.92	1/100 f
Depth to Ground Water (DGW) =	52.40 TOC	1/100 f
Total Well Depth (TWD) =	92.32 TOC	1/100 f

Date/Time 10/3/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1504	4.0	368.0	18.0				clear		
1508	5.0	388.0	18.0	7.83	-	150.6	clear		
1518	1.5	402.5	18.0	7.74		112.2	clear	-	
1543	4.0	502.5	18.0	6.62		101.7	clear		
1614	4.0	626.5	18.0		1		clear	-	
1622	4.0	650.5	19.5	6.62		103.5	clear	••	
1628	4.0	674.5	19.5	6.62		101.6	clear		
1634	4.0	698.5	19.5	6.59		96.8	clear		
1640	4.0	722.5	19.5	6.58		96.0	clear		
1646	4.0	746.5	19.5	6.60		97.2	clear	_	

COMMENTS/OBSERVATIONS: At 1622, 650 water pressure test.

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Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Date Started (yr/n	no/day) 90/10/3 Date Completed (yr/mo/day)	90/10/3
Field Personnel	Joey Gillespie, Richard Burdine	
Site Name	Medley Farm RI/FS - Phase II	
SEC Job#	G-8026	
Well ID #	BW109	
Upgra	edlent X Downgradient	
Weather Condition	ns Clear	
Air Temperature_	18.3-21.1	<u>୯</u>

Total Well Depth (TWD) =	92.32 TOC	1/100 ft
Depth to Ground Water (DGW) ≈	52.40 TOC	1/100 ft
Length of Water Column (LWC) = TWD - DGW =	39.92	1/100 ft
1 Casing Volume (OCV) = LWC x 0.67 =	26.75	gallons
5 Casing Volumes =	133.73	gallons
Method of Well Development Grundfos Subm	nersible Pump	
		
Total Volume of Water Removed		gallons

Date/Time 10/3/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	рΗ	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1652	4.0	770.5	19.5	6.61		100,3	clear		
1658	4.0	794.5	19.5	6.59		97.7	clear		
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COMMENTS/OBSERVATIONS:

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Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Date Started (yr/n	no/day) 90/10/1 Date Completed (yr/mo/day) 90/10/8
Field Personnel	Joey Gillespie, Richard Burdine
Site Name	Medley Farm RI/FS - Phase II
SEC Job#	G-8026
Well ID #	BW110
Upgra	adient X Downgredient
Weather Conditio	ns Cloudy, Drizzling Rain
Air Temperature	25.0 ℃

Total Well Depth (TWD) =		85.63 TOC	1/100 ft
Depth to Ground Water (DGW) =	-	51.30 TOC	1/100 ft
Length of Water Column (LWC) = TWI	D - DGW =	34.33	1/100 ft
1 Casing Volume (OCV) = LWC x	0.67 =	23.00	gallons
5 Casing Volumes =		115.01	gallons
Method of Well Development Grund	ifos Submei	rsible Pump to pur	дө
press	ure test wat	er and to develop	
Total Volume of Water Removed	576.4		gallons

Date/Time 10/1/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (℃)	pН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0815	1.0	14.0	19.0	11.99		2900	clear		
0818	2.0	20.0							pumped dry
0840	0.1	23.0	18.4	12.12		3320	clear		pumped dry
0922	0.2	31.7	18.1	11.57		721	clear		evacuated
0947	0.3	38.5	18.1	11.48		585	clear	-	
1400		51.5	18.6	11.64		685	clear	-	
1854	10.0	67.0	18.5	11.61		956	clear		pumped dry
10/2/0802		77.5	17.0	11.43		825	clear		
0807	2.0	87.5	17.6	11.82		1580	clear		pumped dry
0850	0.2	97.5	17.8	11.05		469	clear		

COMMENTS/OBSERVATIONS:	 	 	 	···		

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Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Date Started (yr/n	no/day) 90/10/1 Date Completed (yr/mo/day) 90/10/8
Field Personnel_	Joey Gillespie, Richard Burdine
Site Name	Medley Farm RI/FS - Phase II
SEC Job#	G-8026
Well ID #	BW110
Upgr	adient X Downgradient
Weather Conditio	nsCloudy, Drizzling Rain
Air Temperature	25.0 ℃

Total Well Depth (TWD) =		85.63 TOC	1/100 ft
Depth to Ground Water (DGW) =		51.30 TOC	1/100 ft
Length of Water Column (LWC) = TWI	D - DGW =	34.33	1/100 ft
1 Casing Volume (OCV) = LWC x	0.67 =	23.00	gallons
5 Casing Volumes =	··	115.01	galions
Method of Well Development <u>Grund</u> press		sible Pump to pur er and to develop.	ge
Total Volume of Water Removed	576.4		gallons

Date/Time 10/2/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0856	0.8	102.5							pumped dry
1327	3.0	112.5	19.7	10.39		297	clear		
1331	2.3	121.5	19.1	11.39		633	clear		pumped dry
1530	10.0	142.5	19.0	10.42		310	clear		pumped dry
10/4/1745	2.8	156.5	18.0	11.16		484	clear/cloudy		
10/5/0849	5.0-8.0	181.5	18.0	10.99		430	clear	5	
0905	1.0	-	18.0	11.18		467	clear	1	· · · · · · · · · · · · · · · · · · ·
0936	1.0	199.5	18.0	9.45	-	224	clear		
1300	0.6	349.5	18.0	7.11		226	clear		
1400	0.0.62	387.0	•••	7.20		214			

COMMENTS/OBSERVATIONS:	 		

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Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Date Started (yr/m	o/day) 90/10/1 Date Completed (yr/mo/day) 90/10/8
Field Personnel _	Joey Gillespie, Richard Burdine
Site Name	Medley Farm RI/FS - Phase II
SEC Job #	G-8026
Well ID #	BW110
Upgra	dient X Downgradient
Weather Condition	ns Cloudy
Air Temperature	23.9-26.7

Total Volume of Water Removed 57	6.4	gallons	
Pump		Distance	
Method of Well Development <u>Grundfos S</u>	ubmersible Pump. ISCO) Bladder	
5 Casing Volumes =	115.01	gallons	
1 Casing Volume (OCV) = LWC x0.67	_ 23.00	gallons	
Length of Water Column (LWC) = TWD - DG\	W = <u>34.33</u>	1/100 ft	
Depth to Ground Water (DGW) =	51.30 TOC	1/100 ft	
Total Well Depth (TWD) =	85.63 TOC	1/100 ft	

Date/Time 10/8/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	рН	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0814	0.7	402.0		9.82		242		-	
0921	0.6	443.0		6.78		203	clear	-	- -
1016	0.6	477.4	18.0	6.79		189.8	clear		 -
1112	0.6	512.4	18.0	7.01		214	clear		
1148	0.6	533.4	18.0	6.97		220	clear	-	
1221	0.7	555.4	18.0	6.93		219	clear		
1234	0.7	563.4	18.0	6.95		221	clear	••	
1254	0.7	576.4	18.0	6.95		219	clear		

COMMENTS/OBSERVATIONS:				
	 	 		

APPENDIX G GROUND WATER LEVEL MONITORING REPORT

PAGE	1	OF	1	



PROJEC	т Мес	lley Farm RI/FS		JOB NUMBER	G-8026
LOCATIO	ON Gaf	fney, S.C.		INSTALLATION NUMBER S	SW1
CLIENT	Med	iley Farm Steering Committ	ee	TYPE OF INSTALLATION	
j -		MEASURING POINT		Saprolite Montoring	Well
1		C Casing		LOCATION See Plan	
		EASURING POINT 690.47		_	
l		N.G.V.D.			
SURVE	- DAIOM	N.G.V.D.		— _	
DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)	REMARKS *	READ BY
6/15/89		52.4	638.07		R.L.B.
6/16/89		52.26	638.21		R.L.B.
7/5/89		52.1	638.37		R.L.B.
7/10/89	1417	51.98	638.49		R.L.B.
7/13/89	1625	51.95	638.52		R.L.B.
7/17/89	0820	51.95	638.52		R.L.B.
7/21/89	1157	51.95	638.52		R.L.B.
7/24/89	0752	51.95	638.52	· · · · · · · · · · · · · · · · · · ·	R.J.H.
8/1/89	0945	51.92	638.55		R.J.H.
9/7/89	1504	53.93	636.54	· · · · · · · · · · · · · · · · · · ·	R.L.B.
1/9/90	-	51.32	639.15		D.D.
1/20/90		51.12	639.35		R.L.B.
2/22/90	1340	50.5	639.97		D.D.
3/7/90	1311	50.24	640.23	<u> </u>	J.W/R.B.
4/17/90		49.41	641.06		D.D.
7/3/90		48.9	641.57		D.D.
8/16/90	1634	49.41	641.06		B.R./J.A.H.
8/21/90	1425	49.50	640.97		R.B./R.E
8/30/90	1517	49.62	640.85		R.L.B.
9/21/90	0854	49.95	640.52		J.E.G.
9/27/90	1741	49.97	640.5		R.L.B.
10/19/90	0805	50.25	640.22		J.E.G.
10/30/90	1254	49.53	640.94		J.E.G.
1/15/90] _	50.19	640.28		D.D.

^{*} INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

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PROJEC	т Мес	lley Farm RI/FS		JOB NUMBER G-80	26
LOCATIO	ON Gaf	iney, S.C.		INSTALLATION NUMBERSW3	i
CLIENT	Med	liey Farm Steering Committ		TYPE OF INSTALLATION	
-		MEASURING POINT	<u></u>	Saprolite Montoring Wel	
1		C Casing		LOCATION See Plan	
		ASURING POINT 671.56	·		
ì		N.G.V.D.			
SORVET		N.G.V.D.			
DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)	REMARKS *	READ BY
7/10/89	1425	68.76	602.8		R.L.B.
7/13/89	1620	68.76	602.8		R.L.B.
7/17/89	826	68.8	602.76		R.L.B.
7/21/89	1210	68.85	602.71		R.L.B.
7/24/89	745	68.84	602.72		R.J.H.
7/26/89	1625	68.82	602.74		R.J.H.
7/31/89	945	68.82	602.74		R.J.H.
8/1/89	932	68.83	602.73		R.J.H.
8/9/89	-	66.96	604.6		D.D
9/7/89	1310	68.92	603.13		R.L.B.
1/9/90	-	68.43	603.13		D.D
1/20/90	_	68.24	603.32		R.L.B.
2/22/90	1500	67.78	603.78		D.D.
3/7/90	1315	67.69	603.87		J.W./R.B.
4/17/90		67.15	604.41		D.D.
7/3/90	•	66.81	604.75		D.D.
8/16/90	1704	66.91	604.65		B.R./J.A.H.
8/23/90	1044	66.90	604.66		R.L.B.
8/30/90	1556	66.92	604.64		R.L.B.
9/21/90	1043	67.10	604.46		J.E.G.
9/27/90	1558	67.09	604.47		R.L.B.
10/23/90	1154	67.10	604.46		J.E.G.
10/30/90	1308	67.18	604.38		J.E.G.
1/15/90	-	67.13	604.43		D.D

[•] INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

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PROJEC	т Мес	iley Farm Ri/FS		JOB NUMBER	G-8026
LOCATION	ON Gaf	fney, S.C.		INSTALLATION NUMBER	SW4
CLIENT		lley Farm Steering Committ		TYPE OF INSTALLATION	
•		MEASURING POINT		Saprolite Montor	ing Well
		C Casing		LOCATION See F	Plan
	<u> </u>	ASURING POINT 671.39			
		N.G.V.D.		<u> </u>	
SURVE	-	N.G.V.D.			
DATE	ПМЕ	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)	REMARKS •	READ BY
7/17/89	836	60.88	610.51		R.L.B.
7/21/89	1215	60.86	610.53		R.L.B.
7/24/89	739	60.83	610.56	<u></u>	R.J.H.
7/26/89	1630	60.79	610.6	<u> </u>	R.J.H.
8/1/89	940	60.78	610.61		R.J.H.
8/9/89		57.56	613.83		D.D.
9/7/89	1313	60.6	610.79		R.L.B.
1/9/90		60.27	611.12		D.D.
1/20/90		59.96	611.43		R.L.B.
2/22/90	1350	59.53	611.86	····	D.D.
3/7/90	1323	59.37	612.02		J.W./R.B.
4/17/90		58.3	613.09		D.D.
7/3/90		56.86	614.53		D.D.
8/16/90	1708	56.64	614.75		B.R./J.A.H
8/23/90	1031	56.68	614.71		R.L.B.
8/30/90	1545	56.66	614.73	·	R.L.B.
9/21/90	1012	56.98	614.41		J.E.G.
9/27/90	1600	56.92	614.47		R.L.B.
10/23/90	1302	57.41	613.98		J.E.G.
10/30/90	1311	57.69	613.70		J.E.G.
11/15/90		57.88	613.51		D.D
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^{*} INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

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PROJEC	T Med	lley Farm RI/FS			JOB NUMBER	G-80	26
1		fney, S.C.			INSTALLATION NUMBER	SW1	01
		lley Farm Steering Committ	ee		TYPE OF INSTALLATION		
-	DESCRIPTION OF MEASURING POINT				Saprolite Montori	ng We	1
i .		C Casing			LOCATION See P	lan	
		ASURING POINT 604.1	18				
1		N.G.V.D.					*
30	-		· · · · · · · · · · · · · · · · · · ·				
DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)		REMARKS *		READ BY
9/21/90	0946	32.94	571.24				J.E.G.
9/27/90	1732	32.85	571.33				R.L.B.
10/23/90	1208	32.03	572.15				J.E.G.
10/29/90	0947	31.97	572.21				J.E.G.
1/15/90		32.04	572.14				D.D
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^{*} INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

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PROJEC	т Мес	lley Farm RI/FS		JOB NUMBER G-8	026
LOCATIO	ON Gaf	fney, S.C.		INSTALLATION NUMBER SW	102
CLIENT	Med	Iley Farm Steering Committ	 ee	TYPE OF INSTALLATION	
DESCRI		MEASURING POINT		Saprolite Montoring We	ell
		C Casing		LOCATION See Plan	
ELEVAT	ION OF ME	ASURING POINT 620.0			 -
		N.G.V.D.			
					,
DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)	REMARKS *	READ BY
8/30/90	1511	39.93	580.14		R.L.B.
9/21/90	0953	40.03	580.04	i	J.E.G.
9/27/90	1747	40.07	580.00		R.L.B.
10/19/90	0903	40.13	579.94		J.E.G.
10/29/90	0911	39.93	580.14		J.E.G.
11/15/90		39.77	580.30		D.D
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^{*} INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

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PROJECT Medley Farm RI/FS			.	OB NUMBER _	G-8()26	
LOCATION Gaffney, S.C.				NSTALLATION N	UMBER SW103	(HP103)	
CLIENT Medley Farm Steering Committee				_ 1	TYPE OF INSTALLATION		
DESCRIPTION OF MEASURING POINT Top of PVC Casing				_	Saprolite	Montoring We	11
				_ ;	OCATION	See Pian	
ELEVATI	ION OF ME	ASURING POINT 635.6	38				
		N.G.V.D.		-	 	· 	
			·				
DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)		REMARKS	•	READ BY
8/23/90	1050	36.7	598.98				R.L.B.
8/30/90	1537	36.89	598.79				R.L.B.
9/21/90	1020	37.25	598.43				J.E.G.
9/27/90	1310	37.45	598.23				G.O.
10/19/90	0840	37.62	598.06				J.E.G.
10/29/90	1618	37.62	598.06		·		J.E.G.
11/15/90		37.69	597.99				D.D
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^{*} INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

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PROJECT Medley Farm RI/FS			JOB NUMBER G-80	026		
LOCATION Gaffney, S.C.			INSTALLATION NUMBER SW104	(HP104)		
CLIENT	Med	lley Farm Steering Committe		_	TYPE OF INSTALLATION	
DESCRI		MEASURING POINT			Saprolite Montoring We	11
To	op of PV	C Casing			LOCATION See Plan	
ELEVAT	ON OF ME	ASURING POINT 649.8	15		<u> </u>	
DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)		REMARKS *	READ BY
8/23/90	0902	23.33	626.52	1.	4 hrs. after bailing dry.	R.L.B.
8/30/90	1550	23.48	626.37			R.L.B.
9/21/90	1000	23.93	625.92		·	J.E.G.
9/27/90	1020	24.04	625.81			G.O.
10/19/90	0820	23.98	625.87			J.E.G.
10/29/90	1220	23.32	626.53			J.E.G.
1/15/90		23.28	626.57			D.D
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^{*} INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

PAGE	1	OF	1



PROJEC	т Med	lley Farm RI/FS		JOB NUMBER G-8	026
LOCATION Gaffney, S.C.			INSTALLATION NUMBER SW	/106	
CLIENT	Med	lley Farm Steering Committ	ee	TYPE OF INSTALLATION	
DESCRI		MEASURING POINT	-	Saprolite Montoring We	ell ·
To	op of PV	C Casing		LOCATION See Plan	
ELEVATI	ON OF ME	ASURING POINT 596.1		-	
		N.G.V.D.			
					·
DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)	REMARKS*	READ BY
9/21/90	1016	11.03	585.09		J.E.G.
9/27/90	1504	11.44	584.68		R.L.B.
10/19/90	0846	11.17	584.95		J.E.G.
0/29/90	1425	10.54	585.58		J.E.G.
11/15/90		10.44	585.68	·	D.D
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^{*} INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

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PROJECT Medley Farm RI/FS			JOB NUMBERG	8026		
LOCATION Gaffney, S.C.			INSTALLATION NUMBER S	W108		
CLIENT	Med	ley Farm Steering Committe			TYPE OF INSTALLATION	
DESCRIF		EASURING POINT		_	Saprolite Montoring V	Vell
		C Casing			LOCATION See Plan	
		ASURING POINT 605.2	 PR			
		N.G.V.D.				
DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)		REMARKS •	READ BY
9/21/90	1034	7.70	597.58		<u> </u>	J.E.G.
9/27/90	1752	7.72	597.56			R.L.B.
10/23/90	1142	7.44	597.84			J.E.G.
10/29/90	1710	7.58	597.70		- 	J.E.G.
11/15/90	_	7.54	597.74			D.D
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[•] INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

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PROJEC	T Med	lley Farm RI/FS			JOB NUMBER	G-8026
LOCATION	ON Gaf	fney, S.C.			INSTALLATION NUMBER	SW109
CLIENT	Med	lley Farm Steering Committ	ee		TYPE OF INSTALLATION	
DESCRI		MEASURING POINT			Saprolite Montori	ng Weli
ľ		C Casing			LOCATION See P	lan
l ——		ASURING POINT 661.2	26	_	 	
1		N.G.V.D.			[
JOHVE						
DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)		REMARKS *	READ BY
9/21/90	1025	52.85	608.41			J.E.G.
9/27/90	1517	52.93	608.33			R.L.B.
10/19/90	0832	53.15	608.11			J.E.G.
10/29/90		53.24	608.02		·	J.E.G.
11/15/90		53.42	607.84			D.D
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^{*} INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

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PROJEC	T Med	lley Farm RI/FS		JOB NUMBER G-80	26
LOCATIO	ON Gaf	fney, S.C.		INSTALLATION NUMBER PZ1	01
i		lley Farm Steering Committe		TYPE OF INSTALLATION	
-		MEASURING POINT		Permanent Piezometer	
		C Casing		LOCATION See Plan	
		ASURING POINT 688.4	19		
i		N.G.V.D.			
552					
DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)	REMARKS *	READ BY
8/23/90	0853	50.87	637.62		R.L.B.
8/30/90	1527	51.24	637.25		R.L.B.
9/21/90	0907	51.38	637.11		J.E.G.
9/27/90	1747	51.41	637.08		R.L.B.
10/19/90	0813	51.55	636.94		J.E.G.
0/30/90	1259	51.62	636.87		J.E.G.
11/15/90		51.76	636.73		D.D
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^{*} INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

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PROJEC	т Мес	iley Farm RI/FS			JOB NUMBER	G-8026
LOCATION	ON Gaf	fney, S.C.			INSTALLATION NUMBER	PZ1
CLIENT	Med	lley Farm Steering Committ	 ee	_	TYPE OF INSTALLATION	
DESCRI		MEASURING POINT			Temporary Piezome	eter
1		C Casing	· · · · · · · · · · · · · · · · · · ·		LOCATION See Plai	
ļ ——-		ASURING POINT 575.41				
		N.G.V.D.	·			
SURVE		N.G.V.D.				
DATE	ПМЕ	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)		REMARKS *	READ BY
7/26/89	1614	7.62	567.79			R.J.H.
8/1/89	854	7.05	568.36			R.J.H.
9/7/89	1335	7.64	567.77			R.L.B.
2/22/90	1555	6.93	568.48		··	D.D.
3/7/90	1214	6.49	568.92			J.W./R.B
4/17/90		6.94	568.47			D.D.
7/3/90		7.73	567.68			D.D
8/16/90	1649	8.19	567.22			B.R./J.A.H.
8/23/90	0951	7.90	567.51			R.L.B.
8/30/90	1458	7.92	567.49			R.L.B.
9/21/90	0936	7.84	567.57			J.E.G.
9/27/90	1535	7.86	567.55			R.L.B.
0/23/90	1216	6.36	569.05		·	J.E.G.
0/29/90	0953	6.80	568.61			J.E.G.
1/15/90		6.96	568.41			D.D
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^{*} INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.



PROJEC	т Med	ley Farm RI/FS		JOB NUMBER G-80	26
LOCATIO	ж Gaff	ney, S.C.		INSTALLATION NUMBER BW1	
CLIENT	CLIENT Medley Farm Steering Committee			TYPE OF INSTALLATION	
DESCRIF	TION OF N	MEASURING POINT		Bedrock Montoring Wel	
To	op of PV	C Casing		LOCATION See Plan	
ELEVATI	ON OF ME	ASURING POINT 689.90			. –
SURVEY	DATUM _	N.G.V.D.			
DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)	REMARKS *	READ BY
6/15/89		51.3	638.6		R.L.B.
6/19/89		51.33	638.57		R.L.B.
7/5/89		51.12	638.78		R.L.B.
7/10/89	1410	51.13	638.77		R.L.B.
7/13/89	1628	51.1	638.8		R.L.B.
7/17/89	817	51.13	638.77		R.L.B.
7/21/89	1158	51.14	638.76		R.L.B.
7/24/89	753	51.14	638.76		R.J.H.
8/1/89	947	51.12	638.78		R.J.H.
9/7/89	1506	51.15	638.75		R.L.B.
1/10/90		50.38	639.52		D.D.
1/20/90		50.36	639.54		R.L.B.
2/22/90	1340	49.66	640.24		D.D.
3/7/90	1309	49.42	640.48		J.W./R.B
4/17/90	I	48.52	641.38		D.D.
7/3/90	ı	48.15	641.75		D.D
8/16/90	1632	48.71	641.19		B.R./J.A.H.
8/21/90	1426	48.80	641.10		R.B./R.E.
8/23/90	0835	48.83	641.07		R.L.B.
8/30/90	1520	49.02	640.88		R.L.B.
9/21/90	0858	49.32	640. <u>58</u>		J.E.G.
9/27/90	1744	49.35	640.55		R.L.B.
10/19/90	0805	49.60	640.30		J.E.G.
10/30/90	1254	49.53	640.37		J.E.G.
1/15/90		49.48	640.42		D.D

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PROJECT Medley Farm RI/FS			JOB NUMBER G-8	026	
LOCATIO	ж Gaff	iney, S.C.		INSTALLATION NUMBER BW	2
CLIENT	Med	ley Farm Steering Committe	ee	TYPE OF INSTALLATION	
DESCRIF	•••	MEASURING POINT		Bedrock Montoring We	<u> </u>
To	op of PV	C Casing		LOCATION See Plan	
ELEVATI	ON OF ME	ASURING POINT 662.99			
SURVEY		N.G.V.D.			
0011121			· · · · · · · · · · · · · · · · · · ·		
DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)	REMARKS *	READ BY
7/31/89	810	66.47	596.52		R.J.H.
8/1/89	825	66.36	596.63		R.J.H.
8/8/89	1317	66.75	596.24		D.D.
9/7/89		66.98	596.01		R.L.B.
1/11/90		66.66	596.33	- 	D.D.
1/20/90		66.64	596.35		R.L.B.
1/22/90	1525	65.93	597.06		D.D.
3/7/90	1319	65.6	597.39		J.W./R.B
4/17/90		64.84	598.15		D.D.
7/3/90		64.96	598.03	·	D.D
8/16/90	1658	65.46	597.53		B.R./J.A.H.
8/23/90	1017	65.48	597.51		R.L.B.
8/30/90	1600	65.59	597.40		R.L.B.
9/21/90	1048	65.83	597.16		J.E.G.
9/27/90	1554	66.06	596.93		R.L.B.
10/23/90	1245	65.74	597.25		J.E.G.
10/30/90		65.82	597.17		J.E.G.
1/15/90	_	65.88	597.11		D.D
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^{*} INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.



PROJEC	T Med	lley Farm RI/FS		JOB NUMBER	G-8026
LOCATIO	ON Gaff	iney, S.C.		INSTALLATION NUMBE	ER BW3
CLIENT	Med	lley Farm Steering Committe	ee	TYPE OF INSTALLATIO	ON
-	***	MEASURING POINT		Bedrock Mon	toring Well
		C Casing		LOCATION S	ee Plan
		ASURING POINT 574.82			
1		N.G.V.D.			
DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)	REMARKS*	READ BY
7/24/89	810	6.9	567.82		R.J.H.
7/26/89	16 <u>10</u>	7.02	567.8		R.J.H.
8/1/89	850	6.72	568.1		R.J.H.
9/7/89	1338	6.99	567.83		M.W.
1/11/90		6.17	568.65		D.D.
1/20/90		6.16	568.66		R.L.B.
2/22/90	1548	5.93	568.89		D.D.
3/7/90	1213	6.13	568.69	· · ·	J.W./R.B
4/17/90		6.38	568.44		D.D.
7/3/90	-	7.03	567.79		D.D
8/16/90	1651	7.46	567.36		B.R./J.A.H
8/23/90	0953	7.26	567.56		R.L.B.
8/30/90	1453	7.21	567.61		R.L.B.
9/21/90	0938	7.20	567.62		J.E.G.
9/27/90	1534	7.20	567.62		R.L.B.
10/23/90	1212	6.70	568.12	Evidence of Flooding	J.E.G
10/29/90	0950	6.38	568.44		J.E.G.
1/15/90		6.50	568.32		D.D
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^{*} INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

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PROJEC	т Мес	lley Farm RI/FS		JOB NUMBERG	-8026
LOCATION	ON Gaf	fney, S.C.		INSTALLATION NUMBER BY	W4
CLIENT	Med	lley Farm Steering Committ	ee	TYPE OF INSTALLATION	
DESCRI		MEASURING POINT		Bedrock Montoring W	/ell
		C Casing		LOCATION See Plan	
		ASURING POINT 564.32			
	DATUM	N.G.V.D.			
SURVE		N.G.V.D.			
DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)	REMARKS *	READ BY
7/21/89	1047	5.77	558.55		R.J.H.
7/24/89	815	5.81	558.51		R.J.H.
7/26/89	1620	5.91	558.41		R.J.H.
8/1/89	907	5.23	559.09		R.J.H.
8/8/89	1330	3.89	560.43		D.D
9/7/89		5.84	558.48		R.L.B.
1/9/90		4.86	559.46		D.D.
1/20/90		5.06	559.26		R.L.B.
2/22/90	1535	4.78	559.54		D.D.
3/7/90	1044	5.23	559.09		J.W./R.B
4/17/90		6.12	558.20		D.D.
7/3/90		5.43	558.89		D.D
8/16/90	1644	6.32	558.00		B.R./J.A.H.
8/23/90	0942	6.14	558.18		R.L.B.
8/30/90	1448	6.02	558.30		R.L.B.
9/21/90	0918	5.87	558.45		J.E.G.
9/27/90	1525	5.84	558.48		R.L.B.
10/23/90	1228	4.52	559.80	Evidence of Flooding	J.E.G.
0/29/90	1001	5.24	559.08		J.E.G.
11/15/90	_	5.36	558.96		D.D
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^{*} INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

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PROJECT Medley Farm RI/FS			JOB NUMBER G-6	3026		
LOCATIO	ON Gaf	fney, S.C.			INSTALLATION NUMBER BY	W105
CLIENT	Med	lley Farm Steering Committ	ee		TYPE OF INSTALLATION	
DESCRI	PTION OF I	MEASURING POINT			Bedrock Montoring We	ell
Τ.	op of PV	C Casing	-		LOCATION See Plan	
ELEVAT	ION OF ME	ASURING POINT 67	1.55			
		N.G.V.D.				
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DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)		REMARKS *	READ BY
8/30/90	1542	56.53	615.02			R.L.B.
9/21/90	1057	57.05	614.50			J.E.G.
9/27/90	1602	57.03	614.52	·		R.L.B.
10/23/90	1259	56.96	614.59			J.E.G.
10/30/90	1313	56.80	614.75		· · · · · · · · · · · · · · · · · · ·	J.E.G.
1/15/90		56.92	614.63			D.D
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^{*} INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

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PROJEC	T Med	lley Farm RI/FS	·	JOB NUMBER G-8	026
LOCATI	on Gaff	fney, S.C.		INSTALLATION NUMBER BY	V106
CLIENT	Med	lley Farm Steering Committ	ee	TYPE OF INSTALLATION	
DESCRI		MEASURING POINT		Bedrock Montoring We	<u> </u>
т	op of PV	C Casing		LOCATION See Plan	
ELEVAT	TON OF ME	ASURING POINT 59	5.76		
SURVE	DATUM _	N.G.V.D.	_		
		DEPTH TO WATER	ELEVATION		
DATE	TIME	FROM MEASURING POINT (FT)	OF WATER (FT)	REMARKS *	READ BY
9/27/90	0800	.5	595.26	* ~ 3.0 ft. above ground surface	R.L.B.
10/19/90	0844	.68	595.08		J.E.G.
10/29/90	1425	.72	595.04		J.E.G.
11/15/90		.80	594.96		D.D
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^{*} INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

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PROJEC	т Med	ley Farm RI/FS		JOB NUMBER G-80)26
LOCATIO	ON Gaff	iney, S.C.		INSTALLATION NUMBER BW	108
CLIENT		lley Farm Steering Committee	ee	TYPE OF INSTALLATION	
-		MEASURING POINT		Bedrock Montoring Wel	į
		C Casing		LOCATION See Plan	
ELEVATI	ON OF ME	ASURING POINT 60	5.54		
		N.G.V.D.	<u> </u>		
	_				
DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)	REMARKS *	READ BY
8/21/90	1036	4.40	601.24		R.L.B.
9/27/90	1754	5.72	599.92	Completed well pad, extra stickup	R.L.B.
10/23/90	1104	5.40	600.24		J.E.G.
10/29/90	1708	5.42	600.22		J.E.G.
11/15/90		5.26	600.38		D.D
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^{*} INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

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PROJEC	т Мес	lley Farm RI/FS			JOB NUMBERG-	8026
LOCATI	ON Gaf	fney, S.C.			INSTALLATION NUMBERB	W109
CLIENT		lley Farm Steering Committ	PA		TYPE OF INSTALLATION	
-		MEASURING POINT			Bedrock Montoring W	
1		C Casing			LOCATION See Plan	
		ASURING POINT 66				
		N.G.V.D.			<u> </u>	····
			·			
DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)		REMARKS *	READ BY
10/19/90	0828	53.63	607.84			J.E.G.
10/29/90	1613	53.70	607.77			J.E.G.
1/15/90		53.84	607.63			D.D
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^{*} INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

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PROJEC	T Med	iley Farm Ri/FS			JOB NUMBER G-8	026
LOCATION	ON Gaf	iney, S.C.			INSTALLATION NUMBER BY	V110
CLIENT		lley Farm Steering Committ	 ee		TYPE OF INSTALLATION	
-		MEASURING POINT	<u></u>		Bedrock Montoring We	 :11
		C Casing			LOCATION See Plan	
			 6.36			
			0.30			
SURVEY	DATUM _	N.G.V.D.				
DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)		REMARKS*	READ BY
10/23/90	1200	48.18	578.18		····	J.E.G.
10/29/90	0944	48.09	578.27	!		J.E.G.
1/15/90		47.95	578.41		·	D.D
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^{*} INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

PAGE	1	OF	1



PROJEC	т Мес	lley Farm RI/FS			JOB NUMBER G-	8026
LOCATION Gaffney, S.C.			INSTALLATION NUMBER Spr			
					TYPE OF INSTALLATION	
CLIENT		Iley Farm Steering Committee			Abandoned Supply W	
			surface	 ·		
a	ajacem t	o well casing			LOCATION See Plan	
ELEVAT	ION OF ME	ASURING POINT675.8	32			
SURVEY	DATUM _	N.G.V.D.				
DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)		REMARKS *	READ BY
9/27/90	1735	33.2	642.62			G.O.
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^{*} INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

PAGE	1	OF	1



PROJEC	т M ed	lley Farm RI/FS Phase II			JOB NUMBER G-80	26			
LOCATIO	on Gaff	fney, S.C.			INSTALLATION NUMBERSL1				
CLIENT	Med	lley Farm Steering Committe	ee .		TYPE OF INSTALLATION				
DESCRIF		MEASURING POINT	-		Stream Level Station				
To	op of Ste	el Rod			LOCATION See Plan				
ELEVATI	ON OF ME	(Elev. prior to ASURING POINT <u>Elev. after 10</u> /	10/23/90 567.85) 23/90 ls 568.01		Adjacent BW3/PZ1				
		N.G.V.D.							
DATE TIME DEPTH TO WATER ELEVATION FROM MEASURING POINT (FT) OF WATER (FT)									
3/7/90	1230	2.96	564.89	After	installation.	R.L.B.			
7/3/90		2.12	565.73			D.D.			
8/30/90	1503	2.15	565.70			R.L.B.			
9/21/90	0942	2.10	565.75		_	J.E.G.			
9/27/90	1538	2.01	565.84			R.L.B.			
10/23/90	1146	1.45	566.56	* Ext	remely heavy flooding caused	J.E.G.			
				the st	eel rod placed in Jones Creek				
	-			to be	nd. Due to this the rods were	·			
				reinst	alled and resurveyed.				
10/29/90	0955	1.74	566.27			J.E.G.			
1/15/90	1	1.75	566.26			D.D			
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^{*} INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

	PAGE	1	OF	1
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PROJEC	т Мес	iley Farm RI/FS Phase II		JOB NUMBER G-6	026							
LOCATH	ON Gaf	fney, S.C.		INSTALLATION NUMBER SL	.2							
CLIENT		lley Farm Steering Committ	ee .	TYPE OF INSTALLATION								
DESCRIPTION OF MEASURING POINT Stream Level Station												
Top of Steel Rod LOCATION See Plan												
			10/23/90 557.40)	Adjacent BW4								
		N.G.V.D.	23/30 18 300.44]									
COMVE	-											
DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	OF WATER (FT)	REMARKS *	READ BY							
3/7/90	1115	3.00	554.4	After installation.	R.L.B.							
7/3/90	-	3.10	554.3		D.D.							
8/30/90	1454	3.14	554.26_		R.L.B.							
9/21/90	0929	3.12	554.28		J.E.G.							
9/27/90	1529	3.09	554.31		R.L.B.							
10/23/90	1234	2.95	557.49	* Extremely heavy flooding caused	J.E.G.							
		.=		the steel rod placed in Jones Creel	4							
				to bend. Due to this the rods were	ļ							
				reinstalled and resurveyed.								
10/29/90	1003	3.19	557.25		J.E.G.							
1/15/90	-	3.18	557.26		D.D							
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^{*} INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

PAGE	1	OF	1	



PROJEC	т Med	lley Farm RI/FS Phase II		JOB NUMBER	G-8026				
LOCATIO	ж Gaff	fney, S.C.		INSTALLATION NUMBER	SL3				
CLIENT	Med	lley Farm Steering Committe	ee	TYPE OF INSTALLATION					
DESCRIP		MEASURING POINT		Stream Gauge					
Т	op of Ste	el Rod		LOCATION See Plan					
ELEVATI	ON OF ME	ASURING POINT 596.	Adjacent BW/SW 106						
		N.G.V.D.		_					
	-								
DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)	REMARKS *	READ BY				
10/29/90	1430	0.86	595.83	·	J.E.G.				
1/15/90	_	1.40	595.29		D.D				
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^{*} INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.



PROJEC	т Мес	liey Farm RI/FS Phase II			JOB NUMBER G-8	3026
LOCATIO	ON Gaf	fney, S.C.			INSTALLATION NUMBER SL	.4
CLIENT	Med	lley Farm Steering Committ	ee		TYPE OF INSTALLATION	
DESCRI	PTION OF I	MEASURING POINT			Stream Gauge	
T	op of Ste	el Rod			LOCATION Downstream	of
ELEVAT	ION OF ME	ASURING POINT588		SL3 & BW/SW108		
SURVEY	DATUM -	N.G.V.D.				
DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)		REMARKS *	READ BY
10/23/90		1.32	586.65		··	J.E.G.
10/29/90		1.45	586.78			J.E.G.
1/15/90		0.93	587.17			D.D
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[•] INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

PAGE	1	OF	1



PROJEC	т <u>Med</u>	iley Farm RI/FS Phase II			JOB NUMBER G-8	026						
LOCATIO	ON Gaff	ney, S.C.		INSTALLATION NUMBERSL5								
CLIENT	Med	ley Farm Steering Committe	ee		TYPE OF INSTALLATION							
DESCRIF		MEASURING POINT	<u> </u>		Stream Gauge							
	Top of Steel Rod LOCATION BW/SV											
ELEVATI	ON OF ME	ASURING POINT 592.	59									
		N.G.V.D.										
			Г —: —:			, 						
DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)		REMARKS *	READ BY						
10/29/90	1716	.95	591.64			J.E.G.						
11/15/90		.84	591.75			D.D						
			· · · · · · · · · · · · · · · · · · ·									
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^{*} INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

APPENDIX H

HYDRAULIC TESTING DATA (Water Pressure Test and Slug Test Data)

APPENDIX H
WATER PRESSURE TEST DATA



WATER PRESSURE TEST DATA REDUCTION

PAGE: ____1 of 2

ATE: ____2/5/90_

	ENT: JECT	Medley Farm : Medley Farm		nmittee					FILE NO.: G-	8026				-	OMPUTED BY: HECKED BY:	R. L. Burd R. L. Burd	
BOR NO.	TEST NO.	TEST SECT. DEPTH RANGE (ft)	TEST SECT. LENGTH, (L) (ft)	D _{GWT}	D _{PG}	PRESSURE INCREMENT		GAUGE PRESSURE HEAD, (Hpg) (ft)	TOTAL DRIVING HEAD (H _T) (ft)	TOTAL DRIVING PRESSURE (P _T) (psi)	∆ _V	∆t (min)	C Ay A† (gal/min)	T=TAKE = Q L (gal/min/ft)	T = 0.13368 T	LV=92.89 T <u>x 150</u> P _T	(cm/sec)
BW2		65.00-85.00	20,00	65.06	7.25	Low	5.000	11,550	83.850	36,299	43.900		8,790	0.439	0.059	22.527	2.93 x 10 ⁻⁴
DWZ		03.00-03.00	20,00	00.00	7.25	Med.	10.000	23,100	95,400	41,299	47.300	6	9,460	0.473	0.063	21.333	2.77 x 10 ⁻⁴
	1			• • • •	-	High	15.000	34.650	106.950	46,299	41,100	4	10.275	0.514	0.069	20,669	2.69 x 10 ⁻⁴
	1					Med.	10.000	23,100	95,400	41,299	36,300	4	9.075	0.454	0,061	20.465	2.68 x 10 ⁻⁴
	1					Low	5.000	11.550	83.850	36.299	25.600	4	6.400	0.320	0.043	16,420	2413 ¥ (0.4
BW3	1	35.00-55.00	20.00	5.15	7,58	Low	14,000	32.340	45.070	19.511	19.300	5	3.860	0.193	0.026	18.425	2.40 x 10-4
	1					Med.	29.000	66.990	79.720	34.511	35.500	5	7,100	0.355	0.047	19.160	2.49 x 10 ⁻⁴
	1	<u></u>			L	High	42.000	97.020	109,750	47,511	54.100	5	10.820	0.541	0.072	21.210	2.76 x 10-4
	1_				<u> </u>	Med.	28.000	64,680	77.410	33.511	38.500	5	7.700	0.385	0.051	21,399	2.78 x 10-4
	1	 	<u> </u>	<u> </u>		Low	14.000	32.340	45.070	19.511	28.100	5	5.620	0.281	0.038	26.826	3.49 x 10-4
BW4	1	18.00-31.00	13.00	3.90	5.20	Low	9.000	20.790	29.890	12.939	0.300	5	0.060	0.005	0.001	0.664	8.64 x 10 ⁻⁶
	1					Med.	16.000	36.960	46.060	19.939	0.000	5	0.000	0.000	0.000	0.000	0.00
	1					High	30,000	69.300	78,400	33.939	41,900	5	8,380	0,645	0.088	35,377	4.60 x 10-4
	1				<u> </u>	Med.	17.000	39.270	48.370	20.939	20.300	5	4.060	0.312	0.042	27.781	3.61 x 10-4
	1_				L	Low	8.000	18.480	27.580	11.939	0.500	5	0.100	0.008	0.001	1.200	1.56 x 10+5

LEGEND

- Length of section being tested.
- $\mathbf{D}_{\mbox{GWT}}$ = Depth to ground water from top of casing (reference point).
- Dpg = Distance to the highest point in the water pressure system from reference point.
- Ppg The actual pressure read from the gauge during each pressure increment.
- HpG = The head pressure at the gauge. This calculated by multiplying the gauge pressure (HpG) by 2.31 feet/psi.(HpG = PpG x 2.31 (ft/psi))
- H_T = The total driving head in the system. This is calculated by adding together the depth to ground water (D_{GWT}), distance to the highest point in the system (D_{PG}), and the gauge pressure head (H_{PG}). (H_T** D_{GWT}** D_{PG} + H_{PG})
- P_T = The total driving pressure in the system. This is calculated by dividing the total driving head (H_T) by 2.31 ft./pei (P_T = H_T ÷ 2.31 (ft./pei))
- Ay The volume of water being introduced over a given period of time or pressure increment.
- At The length of time of a specific pressure increment.
 - The amount of water introduced to the test zone over a specific period of time or pressure increment. This is calculated by dividing the volume of water introduced during a pressure increment (△y) by the length of time (△t) for that pressure increment. (□ ¬√/△t)
- T = The amount of water introduced (Take) per minute per foot of the test zone. This is calculated by dividing Q by the length of the section being tested (T = Q/L).
- T = A unities figure derived by multiplying the Take (Q) by a constant established by Lugeon. (T = 0.13368 x T).
- LV The "Lugeon Value"
- Kequity = Hydraulic conductivity value in centimeters per second. This is determined by converting the "Lugeon Value" by multiplying by 1.3 x 10⁻⁵ cm/sec, (Kequity = LV x 1.3 x 10⁻⁵ cm/sec)

NOTE:

Highlighted hydraulic conductivities are considered to be the most representative based upon the interpretation of the Lugeon value pattern for low, medium, high, medium, and low pressure increments. By evaluating the pattern of the Lugeon values for a pressure test, information can be ascertained as to the type of water flow exhibited (i.e. wash-out, void filling, laminar, etc.) therefore allowing a togical decision to be made as to which stage is the most representative (Houlsby, 1976).



WATER PRESSURE TEST DATA REDUCTION

PAGE: 2 of 2

DATE: ___11/5/90__

	ENT:	Medley Farm : Medley Farm		nmittee					FILE NO.: G-	8028					OMPUTED BY: HECKED BY:	R. L. Buro	
BOR NO.	TEST NO.	TEST SECT. DEPTH RANGE (ft)	TEST SECT. LENGTH, (L) (ft)	D _{GWT}	D _{PG}	PRESSURE INCREMENT	GAUGE PRESSURE (P _{PG}) (psl)	GAUGE PRESSURE HEAD, (Hpg. (ft)	TOTAL DRIVING HEAD (H _T) (ft)	TOTAL DRIVING PRESSURE (P _T) (psi)	Δ _V	(min)	C ^y <u>A`t</u> (gal/min)	T=TAKE = Q L (gal/min/ft)		LV=92.89 T <u>x 150</u> P _T	Kequiv (cm/sec)
	 	· · · · · · · · · · · · · · · · · · ·												 	ļ		<u> </u>
BW108		59.00-81.00	22.00	0.50	3.15	Low	17.500	40.425	44.075	19.080	49.500	6	8.250	0.375	0.050	38.608	4.76 x 10 ⁻⁴
	1					Med.	35.700	82.467	86.117	37.280	157.000	13	12.077	0.549	0.073	27.427	3.57 x 10 ⁻⁴
	1				 	High Med.	53,000	122.430	126.080	54.580	198.000	11 9	18.000	0.818	0.109	27.922	3.83 × 10 4
	1					Low	34.800 16.100	80.388 37.191	84.038 40.841	36.380 17.680	102.000 94.500	12	11.333 7.875	0.515 0.358	0.089	26.375 37.711	3.43 x 10 ⁻⁴ 4.90 x 10 ⁻⁴
BW108	1	74.00-94.00	20.00	5.42	3.65	Low	15.730	36.336	45,408	19.656	1,200	15	0.080	0.004	0.001	0.379	4.93 x 10 ⁻⁶
511100	1	74.00-04.00	20.00			Med.	35.000	80.850	89.920	38.926	23.300	10	2.330	0.117	0.016	5.575	7.25 x 10 ⁻⁵
	1					High	55.200	127,512	136.582	59.126	52.600	15	3,507	0.175	0.023	5.523	7.18 x 10 ⁻⁵
	1				 	Med.	35.000	80.850	89.920	38.926	22.800	10	2.280	0.114	0.015	5.455	7.09 x 10-5
	1					Low	16.000	36,960	48.030	19.926	0.000	10	0.000	0.000	0.000	0.000	0.00
C74/4 CC		70.00.00.00	00.00	50.70	0.50							40			 		
BW109	1	70.00-90.00	20.00	53.70	3.50	Low Med.	9.000	20.790	77.990	33.762	64.500	10 10	6.450	0.323	0.043	17.792	2.31 x 10-4
	+						18.000	41.580	98.780	42.762	88.000	10	8.800	0.440	0.059	19.166	2.49 x 10-4
	+++			ļI	_	High Med.	26.000	60.060	117.260	50.762	108.000	10	10.800 9.370	0.540	0.072	19.814	2.58 x 10 -4
	┝╤┥		 			Low	18.000 9.000	41.580 20.790	98.780 77.990	42.762 33.762	93.700 72.500	10	7.250	0.469	0.063	20.407	2.65 × 10 -
	Ė					LOW	9.000	20.790	77.990	33.762	72.500	10	7.250	0.363	0.048	19.999	2.60 x 10 -4
BW110	1	64.00-84.00	20.00	48.09	4.45	Low	12.000	27.720	80.260	34.745	9.300	8	1.163	0.058	0.008	3.116	4.05 x 10 -5
	-					Med.	24.000	55.440	107.980	48.745	56.100	10	5.610	0.281	0.037	11.177	1.45 x 10 -4
	1					High	34.000	78.540	131.080	56.745	205.100	10	20.510	1.026	0.137	33.662	4.38 x 10 -4
	1					Med.	24.000	55.440	107.980	46.745	31.900	2	15.950	0.798	0.107	31.778	4.13 x 10 -4
	\vdash		45.55			ļ											<u> </u>
	2	69.50-84.00	15.00	48.09	7.20	Low	12.000	27.720	83.010	35,935	0.100	6	0.017	0.001	0.00015	0.058	7.49 x 10 -7
	2			\vdash		Med. High	24.000 35.000	55,440 80.850	110.730 136.140	47.935 58.935	0.000	<u>3</u>	0.000	0.000	0.000	0.000	0.00
BW111	-	189.00-209.00	20.00	48.00	3.20	Low	25.000	57.750	108.950	48.299	0.200	8	0.025	0.001	0.00017	0.050_	6.54 x 10 ⁻⁷
	1					Med.	50.000	115.500	164.700	71.299	0.500	10	0.050	0.003	0.00033	0.065	8.49 × 10-7
	1	<u> </u>	 			High	75.000	173.250	222.450	96.299	0.300	6	0.050	0.003	0.00033	0.048	6.29 x 10 ⁻⁷
	2	189.00-248.00	59.00	67.00	7.10	Low	28.000	64,680	138.780	60.078	0.100	3	0.033	0.001	0,00008	0.018	2.28 x 10 -7
	2	1				Med.	56.000	129.360	203.460	88.078	0.100	4	0.025	0.000	0.00006	0.009	1.16 x 10 -7
	2					High	84.000	194.040	268.140	116.078	0.200	4	0.050	0.001	0.00011	0.014	1.77 x 10 -7
BW112	1	179.00-199.00	20.00	42.00	6.15	Low	24.000	55,440	103,590	44,844	0,200	9	0.022	0.001	0.00015	0.046	6.00 x 10-7
577112	+	170.00-100.00	20.00	72.00	0.13	Med.	48.000	110.880	159.030	68.844	0.400	9	0.022	0.001	0.00030	0.060	7.82 × 10-7
	1					High	72.000	166.320	214.470	92.844	0.350	6	0.058	0.002	0.00039	0.059	7.61 x 10-7
	2	179.00-239.00	60.00	42.00	4.00	Low	27.000	62,370	108.370	46.913	0.000	3	0.000	0.000	0.000	0.000	0.00
	2					Med.	54.500	125.895	171.895	74.413	0.300	3	0.100	0.002	0.00022	0.042	5.42 x 10 ⁻⁷
	2		L			High	81.000	187.110	233.110	100.913	0.400	4	0,100	0.002	0.00022	0.031	4.00 x 10 ⁻⁷

(See Page One For Legend)



BORING NO. BW-2 TEST NO. 1

SEC JOB NO.: G-8026

PAGE: 1 OF 3

PROJECT:	MEDLEY FARMS RI/FS PHASE IA	DATE
CLIENT:	MEDLEY FARMS STEERING COMMITTEE	DATE
OCILITI.	ENVIRONMENTAL PROFINE A ACRUMOTA	DRILL

SEC REP.:

ENVIRONMENTAL DRILLING & SERVICES CONTRACTOR: PACKER WATER **WATER PRESSURE** WATER METER **PUMP** SYSTEM GAGE TYPE Inflatable Turbo Bermouli Screw MFG. Bimbar 1 Rockwell U.S. Gauge Moyno MODEL NO. 3688-301 3L6 W14 I. D. NO.

TEST INTERVAL (FT) 60.35 TO 85.0

ROCK TYPE Fractured Schist

REMARKS Schist is weathered

R. J. Hunt

BOREHOLE DIAMETER (IN) __4.0
DRILLING METHOD __Open hole
coring

STATIC WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE)

DATE	ELAPSED TIME (HRS)	WATER LEVEL	BOTTOM OF CASING	BOTTOM OF HOLE	REMARKS / PACKED OFF INTERVAL
7/31/89		65.05	64.36	85.0	
	 				

CALCULATED HYDROSTATIC HEAD AT MIDPOINT OF TEST ZONE (PSI) = (DEPTH TO STATIC WATER LEVEL—DEPTH TO MIDPOINT OF TEST) x (0.43 PSI / FT)

	ELAPSED	PACKER	GAUGE	METER	RATE OF	DEPTH TO	
TIME	TIME	PRESSURE	PRESSURE	READING	FLOW	WATER IN	REMARKS
	(MIN)	(PSI)	(PSI)	(GALS)	(GALS / MIN)	CASING	· · · · · · · · · · · · · · · · · · ·
14:45		125		1049.1			Pre-Test measurements
14:47		125	5.0	1056.2			Gauge stabilized at 5.0 psi
14:48	1.0	125	5.0	1067.2	11.0		
14:49	2.0	125	5.0	1078.2	11.0		
14:50	3.0	125	5.0	1089.1	10.9		
14:51	4.0	125	5.0	1100.1	11.0		
14:52		125	10.0	1111.4			Gauge stabilized at 10.0 psi
14:53	1.0	125	10.0	1123.2	11.8		
14:54	2.0	125	10.0	1135.1	11.9		
14:55	3.0	125	10.0	1146.8	11.7		
14:56	4.0	125	10.0	1158.7	11.9		
14:58		125	15.0	1171.8			Gauge stabilized at 15.0 psi
14:59	1.0	125	15.0	1183.5	11.7		
15:00	2.0	125		1190.0			Ran out of water
17:14		125		1190.0			Prepare to resume test
17:15.45	•	125	15.0	1205.7			Gauge stabilized at 15.0 psi



	ONSULTA	INTS —					
1			S RI/FS PHA	SEIA			PAGE 2 OF 3
SEC JOB I				_			BORING NO. BW-2
SEC 1011	10						TEST NO1
	ELAPSED	PACKER	GAUGE	METER	RATE OF	DEPTH TO	
TIME	TIME		PRESSURE		FLOW	WATER IN	REMARKS
	(MIN)	(PSI)	(PSI)		(GALS / MIN)	CASING	
17:16:45	1.0	125	15.0 *	1220.3	14.6	<u> </u>	* Gauge jumped briefly to 18 psi
17:17:45	2.0	125	15.0	1233.5	13.2		
17:18:45	3.0	125	15.0	1246.8	13.3		
17:19:30		125	10.0	1256.2			
17:20:30	1.0	125	10.0	1268.5	12.3		
17:21:30	2.0	125	10.0	1280.5	12.0		
17:22:30	3.0	125	10.0	1292.5	12.0		
17:24	••	125	5.0	1303.7			
17:25	1.0	125	5.0	1314.7	11.0		
17:26	2.0	125	5.0	1325.7	11.0		
				1329.3			End Test
							280.2 gallons used in pressure test
 							
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BORING NO. BW-2 TEST NO. 1

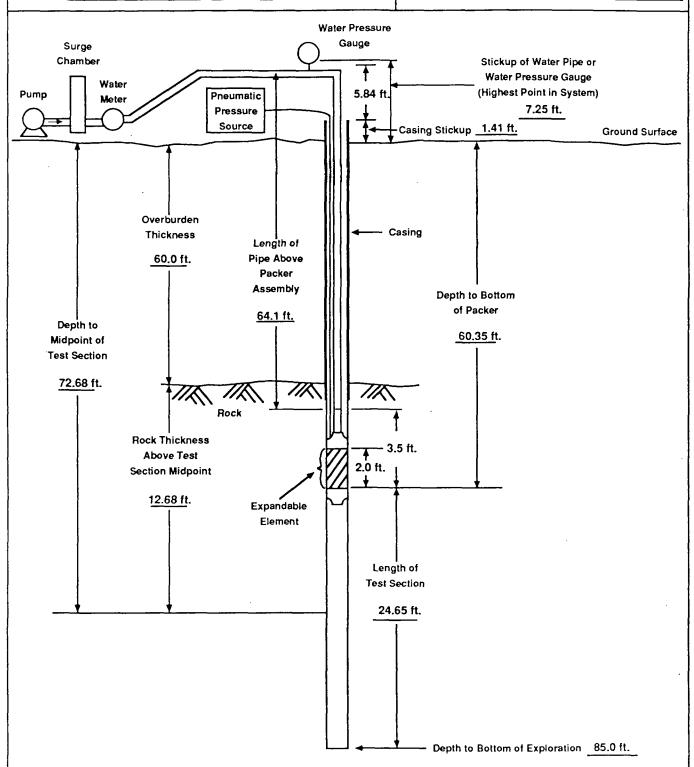
SEC JOB NO. G-8026

PAGE 3 OF 3

PROJECT: MEDLEY FARMS RI/FS PHASE IA

CLIENT: MEDLEY FARMS STEERING COMMITTEE

SEC REP. R. J. HUNT



Note: Water pressure gauge should be a minimum of 6 pipe diameters away from any elbows or pipe constrictions.



SURGE CHAMBER DESCRIPTION _

N/A

WATER PRESSURE TEST

BORING NO. BW-3 TEST NO. 1

SEC JOB NO.: G-8026

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		PAGE.	_ Ur
PROJECT:	MEDLEY FARMS RI/FS PHASE IA	DATE START	: 7/24/89
CLIENT:	MEDLEY FARMS STEERING COMMITTEE	DATE FINISH	7/24/89
	ENVIRONMENTAL DRILLING & SERVICES	DRILLER:	D. G. Fitzpatric
CONTRACTOR:	ENVIRONMENTAL DRILLING & SERVICES		

OOM					SEC REP.: R. J. Hunt
	PACKER SYSTEM	WATER METER	WATER PRESSURE GAGE	WATER PUMP	TEST INTERVAL (FT) 34.1 TO 55.0 ROCK TYPE Fractured Gneiss
TYPE	Inflatable	Turbo	Bermouli	Screw	REMARKS
MFG.	Bimbar 1	Rockwell	U.S. Gauge	Moyno	
MODEL NO.	3688-301	W14		3L6	
I. D. NO.			••	••	BOREHOLE DIAMETER (IN) 4.0
WATER PIPE	I.D. 1" TY	PE Sch. 40	PVC		DRILLING METHOD Open hole

STATIC WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE)

DATE	ELAPSED TIME (HRS)	WATER LEVEL	BOTTOM OF CASING	BOTTOM OF HOLE	REMARKS / PACKED OFF INTERVAL
7/21/89		5.08	35.0	55.0	
7/24/89		5.15	35.0	55.0	

CALCULATED HYDROSTATIC HEAD AT MIDPOINT OF TEST ZONE (PSI) = 16.96 (DEPTH TO STATIC WATER LEVEL—DEPTH TO MIDPOINT OF TEST) x (0.43 PSI / FT)

	ELAPSED		GAUGE	METER	RATE OF	DEPTH TO	
TIME	TIME	PRESSURE	PRESSURE	READING	FLOW	WATER IN	REMARKS
	(MIN)	(PSI)	(PSI)	(GALS)	(GALS / MIN)	CASING	
10:00		125		359.0			Pre-Test measurements
10:00:30		125	14.0	360.4			Gauge stabilized at 14.0 psi
10:01:30	1.0	125	14.0	364.2	3.8		
10:02:30	2.0	125	14.0 *	368.2	4.0		* Pressure jumped briefly to 18 psi
10:03:30	3.0	125	14.0	372.0	3.8		
10:04:30	4.0	125	14.0	375.8	3.8		
10:05:30	5.0	125	14.0 *	379.7	3.9		* Pressure jumped briefly to 18 psi
10:07		125	28.0	390.4			Gauge stabilized at 28.0 psi
10:08	1.0	125	28.0 *	397.3	6.9		* Pressure jumped briefly to 29 ps
10:09	2.0	125	29.0	404.1	6.8		
10:10	3.0	125	29.0	411.2	7.1		
10:11	4.0	125	29.0 *	418.4	7.2		* Pressure jumped briefly to 30 psi
10:12	5.0	125	30.0	425.9	7.5		
10:13		125	42.0 *	436.1			 Gauge stabilized at 42.0 psi but decreased briefly to 40 psi
10:14	1.0	125	42.0 *	446.6	10.5		, i
10:15	2.0	125	42.0	457.7	11.1		

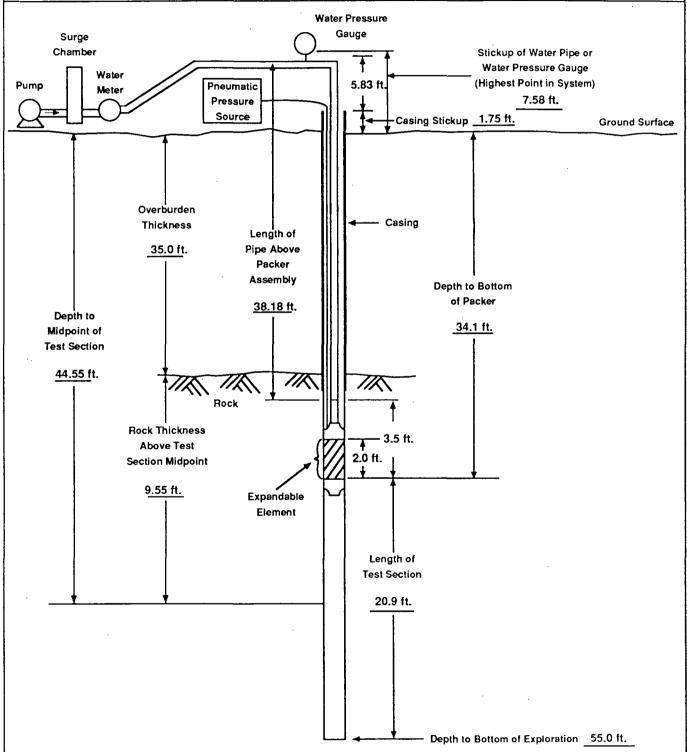


		JNSULIA	1NIS										
		PROJECT MEDLEY FARMS RI/FS PHASE IA PAGE 2 OF 3											
ŀ								BORING NO	BW-3				
	SEC JOB 1	10. <u>G-</u> 8	3026						1				
ļ	 -		1 54 64 55			DATE OF		TEST NO. —					
	TIME	ELAPSED TIME	PACKER PRESSURE	GAUGE PRESSURE	METER READING	RATE OF FLOW	DEPTH TO	RE	MARKS				
		(MIN)	(PSI)	(PSI)		(GALS / MIN)	i .						
	10:16	3.0	125	42.0	46 8.6	10.9							
	10:17	4.0	125	42.0	479.4	10.8							
	10:18	5.0	125	42.0	490.2	10.8							
	10:19:30		125	28.0	502.4	••		Gauge stab	ilized at 28.0 psi				
ļ	10:20:30	1.0	125	28.0	510.2	7.8							
	10:21:30	2.0	125	28.0	517.9	7.5							
	10:22:30	3.0	125	28.0	525.6	7.7							
	10:23:30	4.0	125	28.0	533.3	7.7							
	10:24:30	5.0	125	28.0	540.9	7.6							
	10:25	••	125	14.0 *1	543.9	•-			gauge needle bouncing				
	10:26	1.0	. 125	14.0 *1	549.5	5.6		between 12 p	si & 16 psi				
	10:27	2.0	125	14.0 *1	555.1	5.6							
	10:28	3.0	125	14.0 *	560.7	5.6	-						
	10:29	4.0	125	14.0 *2	566.3	5.6			gauge needle bouncing				
	10:30	5.0	125	14.0 *2	572.0	5.7		between 14 p	si & 16 psi				
					576.3			End Test					
								217.3 gallon	s used in pressure				
								test.					
						<u> </u>							
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BW-3 **BORING NO.** TEST NO. 1 G-8026 SEC JOB NO. PAGE 3 OF 3

PROJECT: **MEDLEY FARMS RI/FS PHASE IA** R. J. HUNT MEDLEY FARMS STEERING COMMITTEE SEC REP.



Note: Water pressure gauge should be a minimum of 6 pipe diameters away from any elbows or pipe constrictions.



maintain constant pressure.

CLIENT:

WATER PRESSURE TEST

BORING NO. BW-4 TEST NO. SEC JOB NO.: G-8026

MEDLEY FARMS RI/FS PHASE IA PROJECT:

MEDLEY FARMS STEERING COMMITTEE

CONTRACTOR-**ENVIRONMENTAL DRILLING & SERVICES** PAGE: __1_ OF __3 **DATE START:** 7/20/89 DATE FINISH: 7/20/89 DRILLER: D. G. Fitzpatrick

SEC REP.: R. L. Burdine

J1011				SEC REP.: R. L. Burdine
PACKER SYSTEM	WATER METER	WATER PRESSURE GAGE	WATER PUMP	TEST INTERVAL (FT) 18.0 TO 31.0 ROCK TYPE Highly fracture Gabbro
Inflatable	Turbo	Bermouli	Screw	REMARKS
Aardvark	Rockwell	U.S. Gauge	Moyno	
3687249	W14		3L6	
				BOREHOLE DIAMETER (IN) 3.5
	PACKER SYSTEM Inflatable Aardvark 3687249	PACKER WATER SYSTEM METER Inflatable Turbo Aardvark Rockwell 3687249 W14	PACKER WATER WATER PRESSURE SYSTEM METER GAGE Inflatable Turbo Bermouli Aardvark Rockwell U.S. Gauge 3687249 W14	PACKER WATER WATER PRESSURE PUMP Inflatable Turbo Bermoull Screw Aardvark Rockwell U.S. Gauge Moyno 3687249 W14 3L6

BOREHOLE DIAMETER (IN) 3.5 DRILLING METHOD H Coring WATER PIPE I. D. ___1" TYPE ____ Sch. 40 PVC SURGE CHAMBER DESCRIPTION Not needed with a Moyno pump. Moyno can

STATIC WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE)

DATE	ELAPSED TIME (HRS)	WATER LEVEL	BOTTOM OF CASING	BOTTOM OF HOLE	REMARKS / PACKED OFF INTERVAL
7/14/89	W.D.	4.2	10.0	10.0	
7/20/89	24	3.9	18.0	31.0	
	1)	1 1	

CALCULATED HYDROSTATIC HEAD AT MIDPOINT OF TEST ZONE (PSI) = ______ (DEPTH TO STATIC WATER LEVEL—DEPTH TO MIDPOINT OF TEST) x (0.43 PSI / FT) 8.82

TIAAF	ELAPSED TIME	PACKER	GAUGE PRESSURE	METER	RATE OF FLOW	DEPTH TO	DEMARKS
TIME	(MIN)	(PSI)	(PSI)		(GALS / MIN)	WATER IN CASING	REMARKS
09:47	1.0	200	9	39370.1	.3	0.1	
09:48	2.0	200	9	39370.4	0	0.1	
09:49	3.0	200	9	39370.4	0	0.1	
09:50	4.0	200	9	39370.4	0	0.1	
09:51	5.0	200	9	39370.4	0	0.1	
09:53	1.0	200	16	39370.4	0	0.1	
09:54	2.0	200	16	39370.4	0	0.1	
09:55	3.0	200	16	39370.4	0	0.1	
09:56	4.0	200	16.5	39370.4	0	0.1	
09:57	5.0	200	17	39370.4	0	0.1	
	2 -						Note: MGP calculated at 40 PSI. Due to no flow situation decided to
10:00	1.0	200	30	39370.4	0	0.1	go to 30 psi on final stage.
10:01	2.0	200	30	39380.3	9.9	0.1	* Had problems getting stabilized
10:02	3.0	200	30	39390.4	10.1	0.1	* True start of stage
10:03	4.0	200	30	39400.8	10.4	0.1	



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1		DLEY FARM		SE IA			PAGE 2 OF 3
SEC JOB I	NO G-8	8026				!	BORING NO. BW-4
320 000 1		· · · · · ·					TEST NO1
	ELAPSED	PACKER	GAUGE	METER	RATE OF	DEPTH TO	
TIME	TIME		PRESSURE	1	1	WATER IN	REMARKS
	(MIN)	(PSI)	(PSI)	(GALS)	(GALS / MIN)	CASING	
10:04	5.0	200	30	39411.4	11.4	0.1	
10:05	6.0	200	30	39422.2	10.8	0.1	
10:07	1.0	200	16	39424.1	2.1	0.1	
10:08	2.0	200	17	39428.8	4.7	0.1	
10:09	3.0	200	17	39434.0	5.2	0.1	
10:10	4.0	200	17	39439.2	5.2	0.1	
10:11	5.0	200	17	39444.4	5.2	0.1	
10:13	1.0	200	8	39445.4	1.0	0.1	
10:14	2.0	200	8	39445.9	0.5	0.1	
10:15	3.0	200	8	39445.9	0.0	0.1	
10:16	4.0	200	8	39445.9	0.0	0.1	
10:17	5.0	200	8	39445.9	0.0	0.1	
							Total amount fo water introduced
							into formation is 76 gallons.
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BORING NO. BW-4 TEST NO. G-8026 SEC JOB NO.

PROJECT:

MEDLEY FARMS RI/FS PHASE IA

PAGE 3 OF 3

CLIENT: MEDLEY FARMS STEERING COMMITTEE R. L. BURDINE SEC REP. Water Pressure Gauge Surge Chamber Stickup of Water Pipe or Water Pressure Gauge Water (Highest Point in System) Pump 5.0 ft. Pneumatic 5.2 ft. Pressure Source Casing Stickup 1.8 ft. **Ground Surface** Overburden Casing Thickness Length of 13.0 ft. Pipe Above Packer Assembly Depth to Bottom of Packer 20.09 ft. Depth to 16.7 ft. Midpoint of **Test Section** 24.5 ft. **Rock Thickness Above Test** 2.0 ft. Section Midpoint 11.5 ft. Expandable Element Length of **Test Section** 13.0 ft. - Depth to Bottom of Exploration 31.0 ft.

Note: Water pressure gauge should be a minimum of 6 pipe diameters away from any elbows or pipe constrictions.



PROJECT:

CLIENT:

WATER PRESSURE TEST

BORING NO. BW106 | TEST NO. SEC JOB NO.: G-8026

PAGE: __1 OF __4 **DATE START:** _9/26/90

DATE FINISH: _9/26/90

ROCK TYPE Quartz-Feldspathic Schlst

DRILLER: K. Warren

SEC REP.: J. Gillespie/R. Burdine

TO 80.6

CONTRAC	CTOR: A	TLANTA TESTING	AND ENGINEERING	·	
	PACKER SYSTEM	WATER METER	WATER PRESSURE GAGE	WATER PUMP Screw Moyno	
TYPE	НQ	Flow	Standard		
MFG.	Tigre Tierra	Neptune	Tererice		
MODEL NO.	34B89-436	5/8T-10		3L6	
I. D. NO.	•••	32959930	100 psi		

MEDLEY FARMS STEERING COMMITTEE

MEDLEY FARMS RI/FS PHASE II

REMARKS __ Influence on Stream

TEST INTERVAL (FT) 58.7

Channel

Galvanized

BOREHOLE DIAMETER (IN) DRILLING METHOD Mud Rotary

Conventional Coring

WATER PIPE I. D. 1.25 TYPE _ SURGE CHAMBER DESCRIPTION

8" cylinder with inlet/outlet

STATIC WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE)

DATE	ELAPSED TIME (HRS)	WATER LEVEL	BOTTOM OF CASING	BOTTOM OF HOLE	REMARKS / PACKED OFF INTERVAL
9/26/90	1.75	+3.0	58.67	80.6	
			 		

32 psi CALCULATED HYDROSTATIC HEAD AT MIDPOINT OF TEST ZONE (PSI) = (DEPTH TO STATIC WATER LEVEL—DEPTH TO MIDPOINT OF TEST) x (0.43 PSI / FT)

	ELAPSED	PACKER	GAUGE	METER	RATE OF	DEPTH TO	
TIME	TIME	PRESSURE	PRESSURE	READING	FLOW	WATER IN	REMARKS
	(MIN)	(PSI)	(PSI)	(GALS)	(GALS / MIN)	CASING	
		150		1775.0		1 ft.	
14:30	1.0	150	17	1792.0	-	1 ft.	
14:32	2.0	110	17	1803.0	11.0	1 ft.	
14:33	3.0	100	17	1811.0	8.0	1 ft.	Loosing pressure in packer
				1820.0	9.0	1 ft.	Start test over - Reset packer
	A	hieving 17 p	si	1828.0		1 ft.	
14:40	0.0	150	17	1859.5		1 ft.	
14:41	1.0	150	17	1858.8		1 ft	
14:42	2.0	150	17	1868.5	9.7	1 ft.	
14:43	3.0	150	18	1874.5	6.0	1 ft	
14:44	4.0	150	17.5	1883.0	8.5	1 ft.	
14:45	5.0	150	17.5	1891.5	8.5	1 ft	
14:46	6.0	150	18.0	1909.0	17.5	1 ft:	
14:48	1.0	150	35.0	1921.0	12.0	1 ft.	
14:49	2.0	150	35.0	1934.0	13.0	1 ft.	
14:50	3.0	150	36.0	1947.0	13.0	1 ft	



PROJECT	ME	DLEY FARM	IS RI/FS PHA	SE II		F	PAGE 2 OF	_4
		2026					BORING NO	BW106
SEC JOB 1	10 G-8	020						1
	EL ADOED	PACKER	GAUGE	METER	RATE OF		TEST NO	1
TIME			PRESSURE		FLOW	DEPTH TO WATER IN	REMAF	RKS
	(MIN)	(PSI)	(PSI)		(GALS / MIN)	CASING		
14:51	4.0	150	35.0	1960.0	13.0	1 ft.	- · · · · · · · · · · · · · · · · · · ·	
14:52	5.0	150	35.0	1972.0	12.0	1 ft.	; 	
14:53	6.0	150	34.5	1984.0	12.0	1 ft.		
14:54	7.0	150	37.0	1997.0	13.0	1 ft.		
14:55	8.0	150	37.5	2010.5	13.0	1 ft.		
14:56	9.0	150	36.0	2024.0	14.0	1 ft.		
14:57	10.0	150	36.0	2037.5	13.5	1 ft.		
14:58	11.0	150	36.0	2050.8	13.3	1 ft.		
14:59	12.0	150	36.0	2064.0	13.2	1 ft.		
14:60	13.0	150	36.0	2078.0	14.0	1 ft.		
15:01	1.0	150	52.0	2094.0	16.0	1 ft.		
15:02	2.0	150	52.0	2115.0	21.0	1 ft.		
15:03	3.0	150	53.0	2134.5	19.5	1 ft.		
15:04	4.0	150	54.0	2154.0	19.5	1 ft.	Out of H20	
15:21	5.0	150	54.0	2156.0		1 ft.	Starting Test Aga	in
15:22	6.0	150	52.0	2181.0	25.0	1 ft.		
15:23	7.0	150	52.0	2206.0	25.0	1 ft.		
15:24	8.0	150	54.0	2228.0	22.0	1 ft.		
15:25	9.0	150	54.0	2250.0	22.0	1 ft.		
15:26	10.0	150	53.0	2271.0	21.0	1 ft.		
15:27	11.0	150	54.0	2292.0	21.0	1 ft.		
15:28	1.0	150	35.0	2303.0	11.0	1 ft.		
15:29	2.0	150	35.0	2314.0	13.0	1 ft.		
15:30	3.0	150	35.0	2337.0	16.0	1 ft.		
15:31	4.0	150	35.0	2346.0	9.0	1 ft.		
15:32	5.0	150	35.0	2362.0	16.0	1 ft.		
15:33	6.0	150	36.0	2377.0	15.0	1 ft.		
15:34	7.0	150	34.0	2391.5	14.5	1 ft.		
15:35	8.0	150	34.0	2400.0	8.5	1 ft		
15:36	9.0	150	34.0	2405.0	5.0	1 ft.		
15:37	1.0	150	17.0	2412.5	7.5	1.4		



PAGE 3 OF 4											
PROJECT	ME	DLEY FARM	S RI/FS PHA	SE II		F	PAGE	<u>. </u>	OF _	4	
222 122 1	un Gré	2026				8	BORING I	NO		BW1	06
SEC JOB I	NO	3020	·				TOT NO			1	
	EL ABOED	DACKER	GAUGE	METER	RATE OF		TEST NO.				
7345	TIME	PACKER	PRESSURE		FLOW	DEPTH TO WATER IN		DE	MA DU	′ 0	ļ
TIME	(MIN)	(PSI)	(PSI)		(GALS / MIN)			KE	MARK	(5	
15:38	2.0	150	17.0	2421.5	9.0	1 ft.					
15:39	3.0	150	17.0	2429.0	7.5	1 ft.				-	
15:40	4.0	150	15.0	2436.5	7.5	1 ft.					
15:41	5.0	150	15.0	2444.0	7.5	1 ft.					
15:42	6.0	150	14.5	2451.5	7.5	1 ft.					
15:43	7.0	150	15.0	2461.1	9.6	1 ft.					
15:44	8.0	150	17.0	2470.8	9.7	1 ft.					
15:45	9.0	150	17.0	2479.5	8.7	1 ft.					
15:46	10.0	150	17.0	2489.0	9.5	1 ft.		_			
15:47	11.0	150	17.0	2498.0	9.0	1 ft.					
15:48	12.0	150	17.0	2507.0	9.0	1 ft.					
15:49				2515.0	8.0	1 ft.	End of	Test			-
							Muddy	water	In str	eam.	
											· · · · · · · · · · · · · · · · · · ·
							720 gal	lons	used l	n pres	ssure test.
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WATER PRESSURE

BORING NO. BW108 TEST NO. 1
SEC JOB NO.: G-8026

		PAGE:1 OF	4
PROJECT:	MEDLEY FARMS RI/FS PHASE II	DATE START: 9/18	8/90
CLIENT:	MEDLEY FARMS STEERING COMMITTEE	DATE FINISH: _9/18	<u>3/90</u>
	ATLANTA TESTING AND ENGINEERING	DRILLER: K. Wa	rren
CONTRACTOR:	ATLANTA ILUTING AND ENGINEERING	SEC DED .1 WV	lie

	PACKER SYSTEM	WATER METER	WATER PRESSURE GAGE	WATER PUMP	
TYPE	HQ	Flow	Standard	Screw	
MFG.	Tigre Tierra	Neptune	Trerice	Moyno	
MODEL NO.	34B89-436	5/8T-10		3L6	
I. D. NO.	-	32959930	100 psi	-	

WATER PIPE I. D. 1.25 TYPE Galvanized

SURGE CHAMBER DESCRIPTION 3.75 ft. long, 6 in. diameter galvanized.

SEC REP.: J. Wylie

TEST INTERVAL (FT) 73.8 TO 93.9

ROCK TYPE Quartz-Feldspathic Schist
REMARKS

BOREHOLE DIAMETER (IN) _ DRILLING METHOD __4.0

HQ Coring

STATIC WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE)

DATE	ELAPSED TIME (HRS)	WATER LEVEL	BOTTOM OF CASING	BOTTOM OF HOLE	REMARKS / PACKED OFF INTERVAL

CALCULATED HYDROSTATIC HEAD AT MIDPOINT OF TEST ZONE (PSI) = 54.5 psi (DEPTH TO STATIC WATER LEVEL—DEPTH TO MIDPOINT OF TEST) x (0.43 PSI / FT)

	ELAPSED		GAUGE	METER	RATE OF	DEPTH TO	
TIME	TIME		PRESSURE	i	FLOW	WATER IN	REMARKS
	(MIN)	(PSI)	(PSI)	(GALS)	(GALS / MIN)	CASING	
14:08		117	20.0	123.2		Visual	* time/time
14:09	1.0	117	15.0	123.2	0	Observations	Peristage/complete test
14:10	2.0	117	15.0	123.2	0	Only	
14:11	3.0	117	14.0	123.2	0		
14:12	4.0	117	16.0	123.6	0.4		
14:13	5.0	117	16.0	124.2	0.6		
14:14	6.0	117	16.0	124.2	0		
14:15	7.0	125	16.0	124.2	0		
14:16	8.0	125	16.0	124.2	0		
14:17	9.0	125	16.0	124.2	0.05		
14:18	10.0	125	16.0	124.3	0.05		
14:19	11.0	125	16.0	124.3	0		
14:20	12.0	125	16.0	124.3	0		
14:21	13.0	125	16.0	124.3	0		
14:22	14.0	125	16.0	124.3	0.05		
14:23	15.0	125	16.0	124.4	0.05		



PROJECT	МЕ	DLEY FARM	IS RI/FS PHA	ı	PAGE _2 OF _4_			
							BORING NOBW108	
SEC JOB I	NOG-	8026					4	
	ELAPSED	PACKER	GAUGE	METER	RATE OF		rest no. ———	
TIME	TIME	i ·	PRESSURE		FLOW	DEPTH TO WATER IN	REMARKS	
	(MIN)	(PSI)	(PSI)	(GALS)	(GALS / MIN)			
14:24	16.0	125	16.0-35.0			1 ft.	* One min. used to from 16	
14:25	1.0	125	35.0	127.2	1.4	1 ft.	to 35 psi.	
14:26	2.0	125	35.0	129.9	2.7	1 ft.	* No miment.	
14:27	3.0	125	35.0	132.3	2.4	1 ft.		
14:28	4.0	125	35.0	135.0	2.7	1 ft.	Stage 1 take = 4.0 gallons	
14:29	5.0	125	35.0	137.6	2.6	1 ft.		
14:30	6.0	125	35.0	140.2	2.6	1 ft.	Very slight decrease in water height	
14:31	7.0	125	35.0	142.6	2.4	1 ft.	in casing above packer.	
14:32	8.0	125	35.0	145.3	2.7	1 ft.	Stage 2 Take = 26.8 gal.	
14:33	9.0	125	35.0	147.9	2.6	1 ft.		
14:34	10.0	125	35.0	150.5	2.4	1 ft.		
14:35	1.0	125	55.0	154.0	3.5	1 ft.		
14:36	2.0	125	55.0	158.0	4.0	1 ft.		
14:37	3.0	125	56.0	162.0	4.0	1 ft.		
14:38	4.0	125	55.0	165.5	3.5	1 ft.		
14:39	5.0	125	56.0	169.3	3.8	1 ft.		
14:40	6.0	125	55.0	173.1	3.8	1 ft.	Dec. has stabilized	
14:41	7.0	125	55.0	177.0	3.9	1 ft.		
14:42	8.0	125	54.0	180.7	3.7	1 ft.		
14:43	9.0	125	53.0	184.4	3.7	1 ft.		
14:44	10.0	125	54.0	188.0	3.6	1 ft.		
14:45	11.0	125	55.0	191.8	3.8	1 ft.		
14:46	12.0	125	55.0	195.5	3.7	1 ft.		
14:47	13.0	125	55.0	199.3	3.8	_1 ft.		
14:48	14.0	125	55.0	202.8	3.5	1 ft.	Stage 3 take = 55.1 gal.	
14:49	15.0	125	55.0	206.6	3.8	1 ft.		
14:50	1.0	125	35.0	209.1	2,5	1 ft.		
14:51	2.0	125	35.0	211.8	2.7	1 ft.		
14:52	3.0	125	35.0	214.1	2.3	1 ft.		
14:53	4.0	125	35.0	216.7	2.6	1 ft.		
14:54	5.0	125	35.0	219.2	2.5	1 ft.		



	7 は20ドリヤ	MIS						
•			IS RI/FS PHA	į.	PAGE _3 OF _4_			
							BORING NO	BW108
SEC JOB I	NOG-1	8026						
			· •		T = . = = = = =	<u> </u>	TEST NO	1
TIME	ELAPSED TIME	PACKER	GAUGE PRESSURE	METER READING	RATE OF FLOW	DEPTH TO WATER IN	DE	MARKS
TIME	(MIN)	(PSI)	(PSI)		(GALS / MIN)		n.	
14:55	6.0	150	35.0	221.8	2.6	1 ft.		
14:56	7.0	150	35.0	224.2	2.4	1 ft.		
14:57	8.0	150	35.0	226.7	2.5	1 ft.		
14:58	9.0	150	35.0	229.2	2.5	1 ft.		
14:59	10.0	150	35.0	231.9	2.7	1 ft.	Stage 4 Take	≈ 22.8 gal.
15:00	1.0	150	16.0	232.1	0.2	1 ft.		<u></u>
15:01	2.0	150	16.0	232.1	0.0	1 ft.		
15:02	3.0	150	16.0	232.1	0.0	1 ft.		
15:03	4.0	150	16.0	232.1	0.0	1 ft.		
15:04	5.0	150	16.0	232.1	0.0	1 ft.		
15:05	6.0	150	16.0	232.1	0.0	1 ft.		
15:06	7.0	150	16.0	232.1	0.0	1 ft.		
15:07	8.0	150	16.0	232.1	0.0	1 ft.		
15:08	9.0	150	16.0	232.1	0.0	1 ft.		
15:09	10.0	150	16.0	232.1	0.0	1 ft.	End of Test	Stage 5 Take = 0.2 gal.
							Total Test Tir	me = 61 min.
							Stage 1 (16 ps	si): 16 min.
							Stage 2 (35 ps	si): 10 min.
	-						Stage 3 (55 ps	si): 15 min.
							Stage 4 (35 ps	si): 10 min.
							Stage 5 (16 ps	si): 10 min.
					<u> </u>			
						<u> </u>	Total Take: 1	08.9 gallons
	·							
							Average Tak	e: 1.78 gpm
1		ļ	1	ļ	Į	Į	<u> </u>	



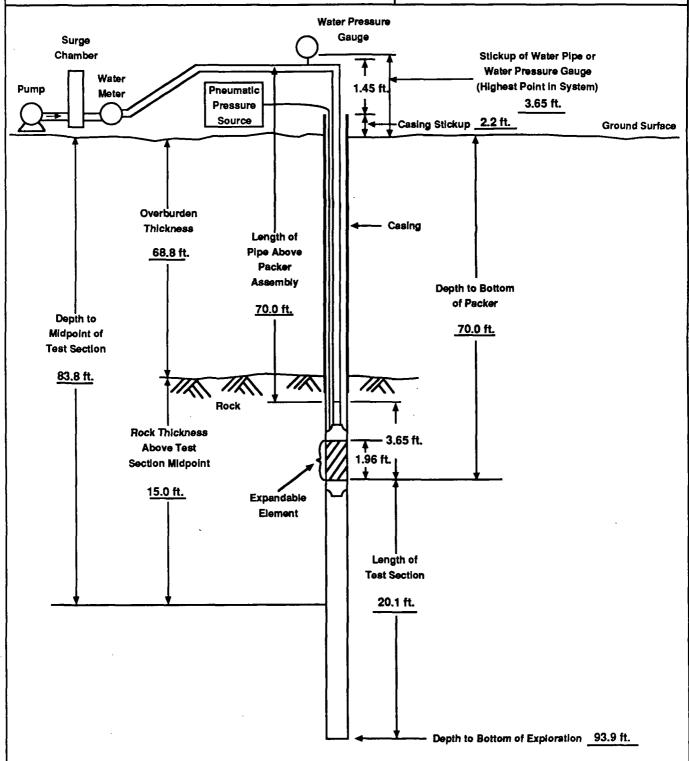
BORING NO. BW108 TEST NO. 1
SEC JOB NO. G-8026

PROJECT: MEDLEY FARMS RIFS PHASE IA

PAGE 4 OF 4

CLIENT: MEDLEY FARMS STEERING COMMITTEE

SEC REP. J. WYLIE



Note: Water pressure gauge should be a minimum of 6 pipe diameters away from any elbows or pipe constrictions.



BORING NO. BY	1			
SEC JOB NO.:	G-{	3026		
PAGE:1	OF	4	_	
DATE START.	10/0	100		

MEDLEY FARMS RI/FS PHASE II
MEDLEY FARMS STEERING COMMITTEE
ATLANTA TESTING AND ENGINEERING

	PAGE:	_ OF _ -
	DATE START	: 10/2/90
•	DATE FINISH	: _10/2/90
	DRILLER:	P. Berman
-	SEC REP.:	J. Gillespie

	PACKER SYSTEM	WATER METER	WATER PRESSURE GAGE	WATER PUMP
TYPE	HQ	Flow	Standard	Screw
MFG.	Tigre Tierra	Neptune	Trerice	Moyno
MODEL NO.	34B89-436	5/8T-10		3L6
1. D. NO.	••	32959930	100 psi	•

ROCK TYPE	Schist				
REMARKS _					
	Highly Fractured	_			
		_			
		_			

TEST INTERVAL (FT) 69.5 TO 90.0

WATER PIPE I. D. 1.25 TYPE Galvanized
SURGE CHAMBER DESCRIPTION .5 ft. diameter cylinder with inlet/outlet

BOREHOLE DIAMETER (IN) 4.0

DRILLING METHOD

Conventional Coring

STATIC WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE)

DATE	ELAPSED TIME (HRS)	WATER LEVEL	BOTTOM OF CASING	BOTTOM OF HOLE	REMARKS / PACKED OFF INTERVAL
10-2-90		~ 50	69.5	90	69.5 to 90.0
·. 			 		

CALCULATED HYDROSTATIC HEAD AT MIDPOINT OF TEST ZONE (PSI) = 29.75 x .43 = 12.79 psi (DEPTH TO STATIC WATER LEVEL—DEPTH TO MIDPOINT OF TEST) x (0.43 PSI / FT)

	ELAPSED		GAUGE	METER	RATE OF	DEPTH TO	
TIME	TIME		PRESSURE		FLOW	WATER IN	REMARKS
	(MIN)	(PSI)	(PSI)	(GALS)	(GALS / MIN)	CASING	
			<u>-</u>	6120.0			Beginnning Reading
			9.0				Flush System
16:17	0.0	150	9.0	6174.0	0.0	0.1	Begin Test
16:18	1.0	150	9.0	6178.0	4.0		
16:19	2.0	150	9.0	6183.0	5.0		
16:20	3.0	150	9.0	6190.0	7.0		
16:21	4.0	150	9.0	9197.5	7.5		·
16:22	5.0	150	9.0	6205.0	7.5		
16:23	6.0	150	9.0	6212.0	7.0		
16:24	7.0	150	9.0	6219.0	7.0		
16:25	8.0	150	9.0	6225.0	6.0		
16:26	9.0	150	9.0	6232.0	7.0		
16:27	10.0	150	9.0	6238.5	6.5		
16:28	0.0	150	18.0	6247.0	8.5		
16:29	1.0	150	18.0	6257.0	10.0		
16:30	2.0	150	18.0	6265.0	8.0		



17:02

0.0

150

9.0

WATER PRESSURE TEST

	ONSULTA	INTS					· · · · · · · · · · · · · · · · · · ·
PROJECT MEDLEY FARMS RI/FS PHASE II						F	PAGE _2 OF _4
SEC JOB I	۷O G-{	3026				E	BORING NOBW109
320 306 1	10						TEST NO1
	ELAPSED	PACKER	GAUGE	METER	RATE OF	DEPTH TO	
TIME	TIME		PRESSURE	i	FLOW	WATER IN	REMARKS
IMIE	(MIN)	(PSI)	(PSI)		(GALS / MIN)	CASING	NEMANNO
16:31	3.0	150	18.0	6275.0	10.0	0.1	
16:32	4.0	150	18.0	6283.0	8.0	0.1	
16:33	5.0	150	18.0	6291.0	8.0	0.1	
16:34	6.0	150	18.0	6300.0	9.0	0.1	
16:35	7.0	150	18.0	6309.0	9.0	0.1	
16:36	8.0	150	18.0	6318.0	9.0	0.1	
16:37	9.0	150	18.0	6326.3	8.3	0.1	
16:38	10.0	150	18.0	6335.0	8.7	0.1	
16:40	0.0	150	26.0	6354.0	19.0	0.1	
16:41	1.0	150	26.0	6366.0	12.0	0.1	
16:42	2.0	150	26.0	6376.5	10.5	0.1	
16:43	3.0	150	26.0	6389.0	12.5	0.1	
16:44	4.0	150	26.0	6398.0	9.0	0.1	·
16:45	5.0	150	26.0	6409.0	11.0	0.1	
16:46	6.0	150	26.0	6419.0	10.0	0.1	
16:47	7.0	150	26.0	6430.0	11.0	0.1	
16:48	8.0	150	26.0	6440.5	10.5	0.1	
16:49	9.0	150	26.0	6451.0	10.5	0.1	
16:50	10.0	150	26.0	6462.0	11.0	0.1	
16:51	0.0	150	18.0	6471.0	9.0	0.1	
16:52	1.0	150	18.0	6480.5	9.5	0.1	
16:53	2.0	150	18.0	6490.0	9.5	0.1	
16:54	3.0	150	18.0	6499.0	9.0	0.1	
16:55	4.0	150	18.0	6508.5	9.5	0.1	
16:56	5.0	150	18.0	6518.0	9.5	0.1	
16:57	6.0	150	18.0	6527.0	9.0	0.1	
16:58	7.0	150	18.0	6536.5	9.5	0.1	
16:59	8.0	150	18.0	6546.0	9.5	0.1	
17:00	9.0	150	18.0	6555.0	9.0	0.1	
17:01	10.0	150	18.0	6564.7	9.7	0.1	

6572.0

7.3

0.1

SIRRINE	Ξ
ENVIRONMENTA CONSULTANT	L

C (ONSULTA	NTS -				<u>. </u>	<u> </u>
1	PROJECT MEDLEY FARMS RI/FS PHASE II PAGE 3 OF 4						
SEC JOB I	NOG-8	3026					BORING NO. BW109
						7	TEST NO1
	ELAPSED	PACKER	GAUGE	METER	RATE OF	DEPTH TO	
TIME	TIME	PRESSURE	PRESSURE	READING	FLOW	WATER IN	REMARKS
	(MIN)	(PSI)	(PSI)	(GALS)	(GALS / MIN)	CASING	
17:03	1.0	150	9.0	6579.0	7.0	0.1	
17:04	2.0			6586.0	7.0	0.1	
17:05	3.0	150	9.0	6593.5	7.5	0.1	
17:06	4.0	150	9.0	6601.0	7.5	0.1	
17:07	5.0	150	9.0	6608.1	7.1	0.1	
17:08	6.0	150	9.0	6615.5	7.4	0.1	
17:09	7.0	150	9.0	6622.7	7.2	0.1	
17:10	8.0	150	9.0	6630.0	7.3	0.1	
17:11	9.0	150	9.0	6637.5	7.5	0.1	
17:12	10.0	150	9.0	6644.5	7.0	0.1	
17:12:28	_			6646.5		•	Test Complete
							526.5 gallons used in pressure test.
			,				
_					—		
					<u></u>		



BW109 BORING NO. TEST NO. G-8026 SEC JOB NO.____ PAGE 4 OF 4

PROJECT: MEDLEY FARMS RI/FS PHASE IA SEC REP. J. GILLESPIE

CLIENT: MEDLEY FARMS STEERING COMMITTEE

Water Pressure Gauge Surge Chamber Stickup of Water Pipe or **Water Pressure Gauge** (Highest Point in System) .5 ft. Pump Pneumatic 3.5 ft. Pressure Source Casing Stickup 1.65 ft. **Ground Surface** Overburden Casing Thickness Length of Pipe Above 69.5 ft. Packer **Assembly** Depth to Bottom of Packer 69.2 ft. Depth to 67.0 ft. Midpoint of **Test Section** 79.75 ft. **Rock Thickness Above Test** Section Midpoint 10.25 ft. Expandable Element Length of **Test Section** 20.5 ft. Depth to Bottom of Exploration 90.0 ft.

Note: Water pressure gauge should be a minimum of 6 pipe diameters away from any elbows or pipe constrictions.



BORING NO. B		TEST NO.	1
SEC JOB NO.:	G-8	3026	
PAGE: 1	OF	3	

PROJECT:	MEDLEY FARMS RI/FS PHASE II
CLIENT:	MEDLEY FARMS STEERING CO

MEDLEY FARMS STEERING COMMITTEE

ATLANTA TESTING AND ENGINEERING **CONTRACTOR:**

DATE START: 9/28/90 DATE FINISH: _9/28/90 DRILLER: K. Warren

SEC REP.:

WATER WATER PRESSURE WATER PACKER **PUMP** SYSTEM METER GAGE TYPE Screw HQ Flow Standard MFG. **Tigre Tierra** Trerice Moyno Neptune MODEL NO. 3L6 34B89-436 5/8T-10 --I. D. NO. 32959930 100 psi

TEST INTERVAL (FT) 64.1 TO 84.1 **ROCK TYPE** Gneiss REMARKS **Highly Fractured**

J. Gillespie

WATER PIPE I. D. 1.25 TYPE SURGE CHAMBER DESCRIPTION

Galvanized Threaded & Coupled Cylinder

DRILLING METHOD Conventional HQ Coring

BOREHOLE DIAMETER (IN)

STATIC WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE)

DATE	ELAPSED TIME (HRS)	WATER LEVEL	BOTTOM OF CASING	BOTTOM OF HOLE	REMARKS / PACKED OFF INTERVAL
9-28-90	12	44.1	64.1	84.5	62 ft. to 84.5
					

CALCULATED HYDROSTATIC HEAD AT MIDPOINT OF TEST ZONE (PSI) = 13.07 psi (DEPTH TO STATIC WATER LEVEL—DEPTH TO MIDPOINT OF TEST) x (0.43 PSI / FT)

	ELAPSED	PACKER	GAUGE	METER	RATE OF	DEPTH TO	
TIME	TIME	PRESSURE	PRESSURE	READING	FLOW	WATER IN	REMARKS
	(MIN)	(PSI)	(PSI)	(GALS)	(GALS / MIN)	CASING	
09:53				5491.0	15.5	0.2	Flushing System
09:55	0.0	150	12.0	5522.0	1.0		Inflate Packer and Begin Test
09:56	1.0	150	12.0	5523.0	1.0		
09:57	2.0	150	12.0	5524.8	1.8		
09:58	3.0	150	12.0	5526.1	1.3		
09:59	4.0	150	12.0	5527.1	1.0		
10:00	5.0	225	12.0	5528.2	1.1		225.0 psi Packer water flowing
10:01	6.0	200	12.0	5529.3	1.1		over casing slightly.
10:02	7.0	150	12.0	5530.5	1.2		
10:03	8.0	180	12.0	5531.3	0.8		
10:04	0.0	160	12.0	5535.2	3.9		
10:05	1.0	150	24.0	5541.7	6.5		
10:06	2.0	150	24.0	5546.1	4.4		
10:07	3.0	150	24.0	5550.7	4.6		
10:08	4.0	150	24.0	5556.0	5.3		



	ONSULIA	NN 15					
1		DLEY FARM		PAGE _2 OF _3			
SEC JOB I	un G-l	3026					BORING NO. BW110
SEC JOB I	NO					 -	TEST NO1
	ELAPSED	PACKER	GAUGE	METER	RATE OF	DEPTH TO	lest no.
TIME	TIME		PRESSURE		1	WATERIN	REMARKS
	(MIN)	(PSI)	(PSI)	ł	(GALS / MIN)		NEMARKS
10:09	5.0	150	24.0	5561.4	5.4	0.2	
10:10	6.0	150	24.0	5567.0	5.6	0.2	
10:11	7.0	150	24.0	5572.8	5.8	0.2	
10:12	8.0	150	24.0	5578.6	5.8	0.2	
10:13	9.0	150	24.0	5585.0	6.4	0.2	
10:14	10.0	150	24.0	5591.3	6.3	0.2	
10:16	0.0	150	34.0	5612.8	21.5	0.2	
10:17	1.0	150	34.0	5629.8	17.0	0.2	
10:18	2.0	150	34.0	5646.2	16.4	0.2	
10:19	3.0	150	34.0	5666.6	26.4	0.2	
10:20	4.0	150	34.0	5685.4	18.8	0.2	
10:21	5.0	150	34.0	5705.5	20.1	0.2	
10:22	6.0	150	34.0	5726.6	21.1	0.2	
10:23	7.0	150	34.0	5747.7	21.1	0.2	
10:24	8.0	150	34.0	5769.3	21.6	0.2	Out of water
10:25	9.0	150	34.0	••		0.2	Start test again
10:31	10.0	150	34.0	5794.0	24.7	0.2	water emitting from beneath pine
10:32	11.0	150	34.0	5817.9	23.9	0.2	tree & upgradient.
10:33	0.0	150	24.0	5836.4	18.5	0.2	
10:34	1.0	150	24.0	5851.8	15.4	0.2	<u> </u>
10:35	2.0	150	24.0	5868.3	16.5	0.2	
10:36				5886.4	18.1	0.2	Pumping water faster than supply
			<u> </u>			<u> </u>	line can keep up.
··							A total of 395.4 gallon introduced
							during pressure testing.
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			<u> </u>			ļ	
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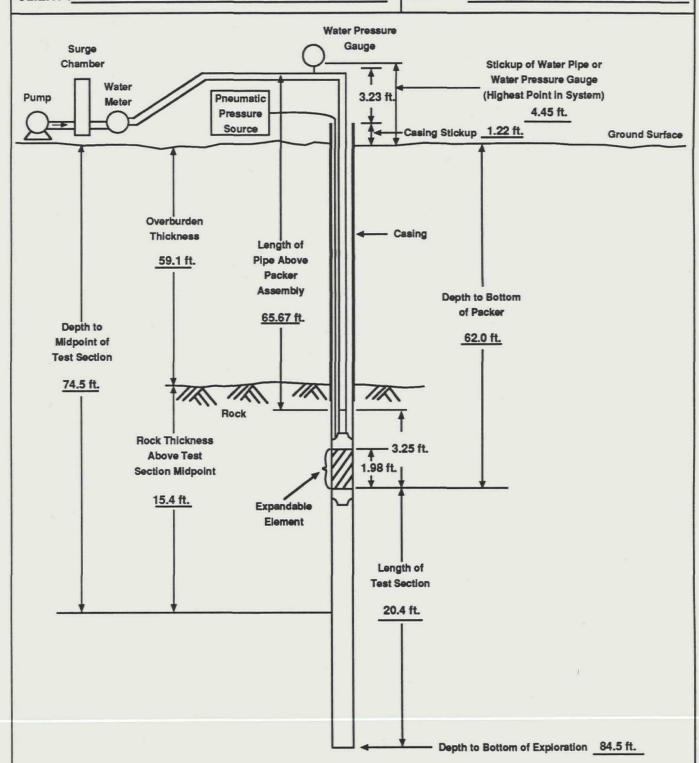


BORING NO. BW110 TEST NO. 1
SEC JOB NO. G-8026

PROJECT: MEDLEY FARMS RI/FS PHASE IA

CLIENT: MEDLEY FARMS STEERING COMMITTEE

PAGE 3 OF 3
SEC REP. J. GILLESPIE



Note: Water pressure gauge should be a minimum of 6 pipe diameters away from any elbows or pipe constrictions.



BORING NO. BW110 TEST NO. SEC JOB NO.: G-8026 PAGE: __1__ OF _

MEDLEY FARMS RI/FS PHASE II PROJECT:

MEDLEY FARMS STEERING COMMITTEE CLIENT:

ATLANTA TESTING AND ENGINEERING CONTRACTOR:

DATE START: 9/28/90 DATE FINISH: 9/28/90 DRILLER: K. Warren SEC REP.: J. Gillespie TEST INTERVAL (FT) 69.5 TO 84.5 ROCK TYPE Gneiss

Tight with few breaks

4.0

WATER WATER PRESSURE WATER PACKER SYSTEM METER GAGE PUMP **TYPE** HQ Flow Standard Screw MFG. Tigre Tierra Neptune Trerice Moyno MODEL NO. **3L6** 34B89-436 5/8T-10 I. D. NO. 32959930 100 psi

Galvanized Threaded & Coupled WATER PIPE I. D. 1.25 TYPE

BOREHOLE DIAMETER (IN) DRILLING METHOD Conventional HQ Coring

REMARKS

8 inch cylinder with inlet/outlet SURGE CHAMBER DESCRIPTION

STATIC WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE)

DATE	ELAPSED TIME (HRS)	WATER LEVEL	BOTTOM OF CASING	BOTTOM OF HOLE	REMARKS / PACKED OFF INTERVAL		
9-28-90	2	44.1	64.1	84.1	69.5 ft. to 84.5 ft.		

CALCULATED HYDROSTATIC HEAD AT MIDPOINT OF TEST ZONE (PSI) = 14.10 psi (DEPTH TO STATIC WATER LEVEL—DEPTH TO MIDPOINT OF TEST) x (0.43 PSI / FT)

- : ,	ELAPSED	PACKER	GAUGE	METER	RATE OF	DEPTH TO	
TIME	TIME	PRESSURE	PRESSURE		FLOW	WATER IN	REMARKS
	(MIN)	(PSI)	(PSI)	(GALS)	(GALS / MIN)	CASING	
11:32	0.0	150	12.0	5929.3	0.0	1.0	After flushing system; begin test
11:33	1.0	150	12.0	5929.3	0.0	1.0	No take
11:34	2.0	150	12.0	5929.3	0.0	1.0	
11:35	3.0	150	12.0	5929.4	0.1	1.0	
11:36	4.0	150	12.0	5929.4	0.0	1.0	
11:37	5.0	150	12.0	5929.4	0.0	1.0	
11:38							
11:39	6.0	150	12.0	5929.4	0.0	1.2	* 11:39:22 Shut down test to
11:45	0.0	190	24.0	5968.5	0.0	1.2	tighten loose fitting adding
11:46	1.0	200	24.0	5968.5	0.0	1.2	teflon tape reflushing system
11:47	2.0	180	24.0	5968.5	0.0	1.2	and restart test.
11:48	3.0	150	24.0	5968.5	0.0	1.2	
11:49	0.0	150	35.0	5968.5	0.0	1.2	
11:50	1.0	150	35.0	5968.5	0.0	1.2	
11:51	2.0	150	35.0	5968.5	0.0	1.2	
11:52	3.0	150	35.0	5968.5	0.0	1.2	



PROJECT MEDLEY FARMS RI/FS PHASE II PAGE _2 OF _3										
PROJECT	PROJECT									
SEC JOB N	10. <u> </u>	3026				E	BORING NO. BW110			
						 1	TEST NO2			
·		PACKER	GAUGE	METER	RATE OF	DEPTH TO				
TIME			PRESSURE			WATER IN	REMARKS			
	(MIN)	(PSI)	(PSI)		(GALS / MIN)					
11:53	4.0	150	35.0	5968.5	0.0	1.2	No take			
11:54	5.0	150	35.0_	5968.5	0.0	1.2				
11:55	6.0	150	35.0	5968.5	0.0	1.2	No take			
						<u> </u>				
							A total of 39.2 gallons introduced			
							during No. 2 pressure test.			
							A total of 434.6 gallons were			
							introduced during pressure test			
							No. 1 and No. 2.			
		"								
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				-						
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	_									



CLIENT:

WATER PRESSURE TEST ASSEMBLY SINGLE PACKER TEST

BORING NO. BW110 TEST NO. 2

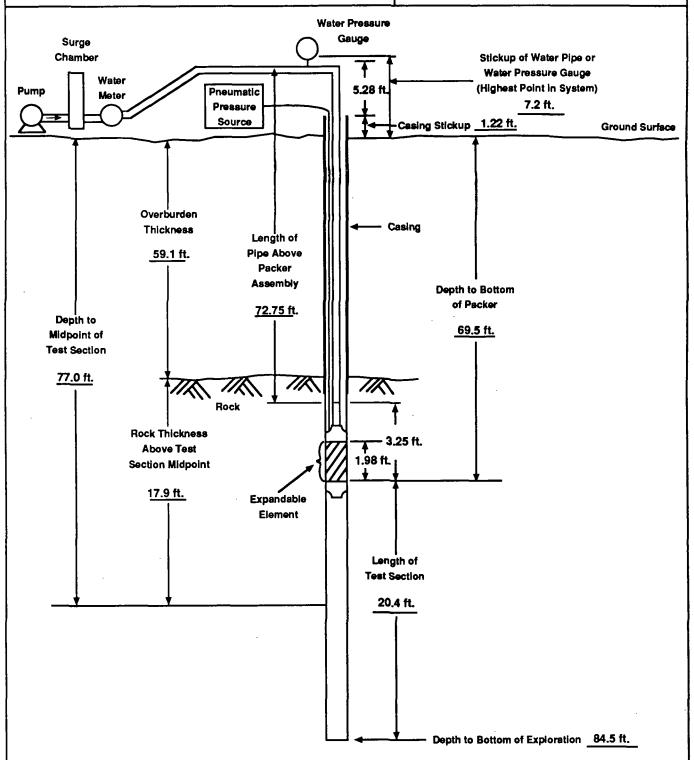
SEC JOB NO. G-8026

PAGE 3 OF 3

PROJECT : MEDLEY FARMS RI/FS PHASE IA

MEDLEY FARMS STEERING COMMITTEE

SEC REP. J. GILLESPIE



Note: Water pressure gauge should be a minimum of 6 pipe diameters away from any elbows or pipe constrictions.



SURGE CHAMBER DESCRIPTION

PROJECT:

CLIENT:

WATER PRESSURE TEST

BORING NO. BW111 TEST NO. SEC JOB NO.: G-8026

PAGE: __1__ OF __ **DATE START: 10/10/90 DATE FINISH: 10/10/90**

DRILLER: P. Bergman SEC REP .: J. Gillespie/R. Burdine

TEST INTERVAL (FT) 189.0 TO 209.0 ROCK TYPE Gneiss

REMARKS **Very Competent Rock**

BOREHOLE DIAMETER (IN) DRILLING METHOD Air Rotary/Conventional Coring

CONTRACTOR: WATER WATER PRESSURE WATER **PACKER PUMP** METER GAGE SYSTEM **TYPE** HQ Flow Standard Screw MFG. **Tigre Tierra** Rockwell Trerice Moyno MODEL NO. 34B89-436 S-04 3L6 I. D. NO. 42941689 42941689 --Galvanized Threaded & Coupled WATER PIPE I. D. 1.25 TYPE

Cylinder

MEDLEY FARMS STEERING COMMITTEE

ATLANTA TESTING AND ENGINEERING

MEDLEY FARMS RI/FS PHASE II

STATIC WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE)

DATE	ELAPSED TIME (HRS)	WATER LEVEL	BOTTOM OF CASING	BOTTOM OF HOLE	REMARKS / PACKED OFF INTERVAL
10-10-90		46.0	189.0	209.0	189.0 ft. to 209.0 ft.
<u> </u>					

CALCULATED HYDROSTATIC HEAD AT MIDPOINT OF TEST ZONE (PSI) = 13.07 psi (DEPTH TO STATIC WATER LEVEL—DEPTH TO MIDPOINT OF TEST) x (0.43 PSI / FT)

	ELAPSED		GAUGE	METER	RATE OF	DEPTH TO	
TIME		PRESSURE			FLOW	WATER IN	REMARKS
	(MIN)	(PSI)	(PSI)	(GALS)	(GALS / MIN)	CASING	
16:47				0.000			Purging Air (Flushing System)
16:53	0.0	150	25.0	44.0	0.0	2.1	Start Test.
16:54	1.0	150	25.0	44.0	0.0	2.1	
16:55	2.0	150	25.0	44.0	0.0	2.1	
16:56	3.0	150	25.0	44.0	0.0	2.1	
16:57							
16:58	4.0	150	25.0	44.3	0.0	2.2	
16:59	5.0	150	25.0	44.3	0.0	2.2	Check water flow.
17:00	6.0	150	25.0	44.3	0.0	2.2	
17:01	7.0	150	25.0	44.5	0.2	2.2	
17:02	8.0	150	25.0	44.5	0.0	2.2	
17:03	0.0	150	50.0	44.5	0.0	2.2	
17:05	1.0	150	50.0	44.6	0.1	2.2	
17:06	2.0	150	50.0	44.6	0.0	2.2	
17:07	3.0	150	50.0	44.675	0.075	2.2	
17:08	4.0	150	50.0	44.7	0.025	2.2	* Packer leaking gas.



	/N30618	\i\ i 3							
,		DLEY FARM	ł	PAGE _2 OF _3_					
							BORING NOBW111		
SEC JOB I	۷0 ن	3026	 						
		r 				·	TEST NO1		
710.50	ELAPSED TIME		GAUGE PRESSURE	METER	RATE OF FLOW	DEPTH TO WATER IN	DEMARKS		
TIME	(MIN)	(PSI)	(PSI)		(GALS / MIN)	3	REMARKS		
17:09	5.0	200	50.0	44.8	0.3	2.2	Slowed leak		
17:10	6.0	200	50.0	44.8	0.0	2.2			
17:11	7.0	200	50.0	44.8	0.0	2.2			
17:12	8.0	200	50.0	44.9	0.1	2.2			
17:13	9.0	200	50.0	44.9	0.0	2.2			
17:14	10.0	200	50.0	45.0	0.1	2.2			
17:15	0.0	200	75.0	45.1	0.1	2.2			
17:16	1.0	200	75.0	45.0	0.0	2.2			
17:17	2.0	200	75.0	45.2	0.2	2.2			
17:18	3.0	200	75.0	45.2	0.0	2.2			
17:19	4.0	200	75.0	45.3	0.1	2.2			
17:20	5.0	200	75.0	45.4	0.1	2.2			
17:21	6.0	200	75.0	45.4	0.0	2.2	End of test.		
							A total of 45.4 gallons introduced		
							during the pressure test.		
					<u> </u>		A total of 44 gallons of this was		
	· · · · · · · · · · · · · · · · · · ·						to flush system and fill casing.		
									
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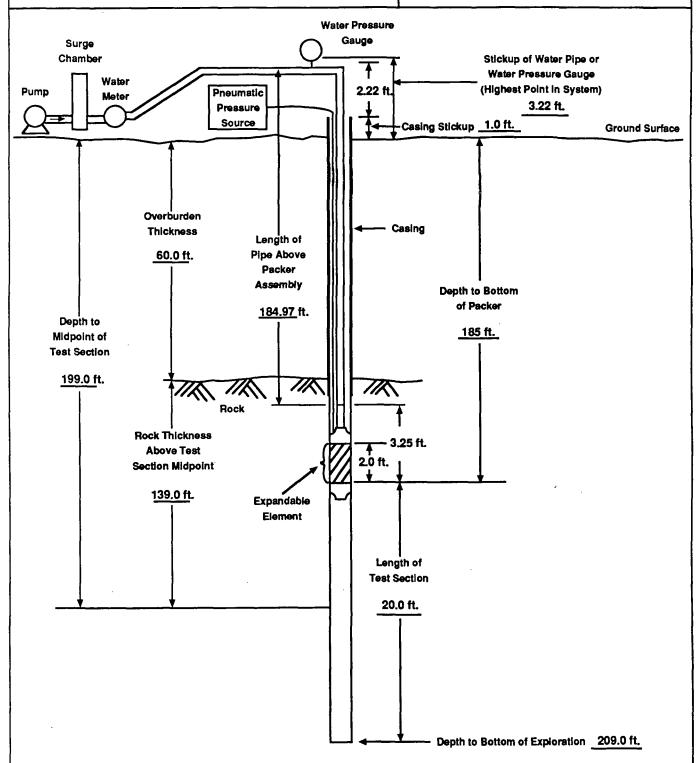
BORING NO. BW111 TEST NO. 1

SEC JOB NO. G-8026

PAGE 3 OF 3

PROJECT: MEDLEY FARMS RI/FS PHASE IA PAGE 3 OF 3

CLIENT: MEDLEY FARMS STEERING COMMITTEE SEC J. GILLESPIE/R. BURDINE



Note: Water pressure gauge should be a minimum of 6 pipe diameters away from any elbows or pipe constrictions.



PROJECT:

CONTRACTOR:

CLIENT:

WATER PRESSURE **TEST**

BORING NO. BW111 TEST NO.

2

SEC JOB NO.: G-8026

PAGE: 1 OF DATE START: 10/24/90

DATE FINISH: _10/24/90 DRILLER: P. Bergman

TEST INTERVAL (FT) 189.0 TO 209.0

SEC REP .: J. Gillespie/R. Burdine

Gneiss ROCK TYPE

REMARKS

Very Competent Rock

BOREHOLE DIAMETER (IN) 3 1/8 - 2 3/4 DRILLING METHOD

Conventional/Wire line

WATER WATER WATER PRESSURE PACKER PUMP SYSTEM METER GAGE **TYPE** HQ Flow Standard Screw MFG. Rockwell **Tigre Tierra Trerice** Moyno MODEL NO. **3L6** 34B89-436 S-04 I. D. NO. 42941689 100 psl

MEDLEY FARMS RI/FS PHASE II

MEDLEY FARMS STEERING COMMITTEE

ATLANTA TESTING AND ENGINEERING

WATER PIPE I. D. 1.25 TYPE

Galvanized

6 inch. cylinder 3 ft. tall with inlet/outlet SURGE CHAMBER DESCRIPTION _

STATIC WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE)

DATE	ELAPSED TIME (HRS)	WATER LEVEL	BOTTOM OF CASING	BOTTOM OF HOLE	REMARKS / PACKED OFF INTERVAL
10-24-90		67.96	189.0	284.4	189.0 ft. to 284.4 ft.
					Ref. Log Book #4 pg. 50 & 51.

CALCULATED HYDROSTATIC HEAD AT MIDPOINT OF TEST ZONE (PSI) = 13.07 psl (DEPTH TO STATIC WATER LEVEL—DEPTH TO MIDPOINT OF TEST) x (0.43 PSI / FT)

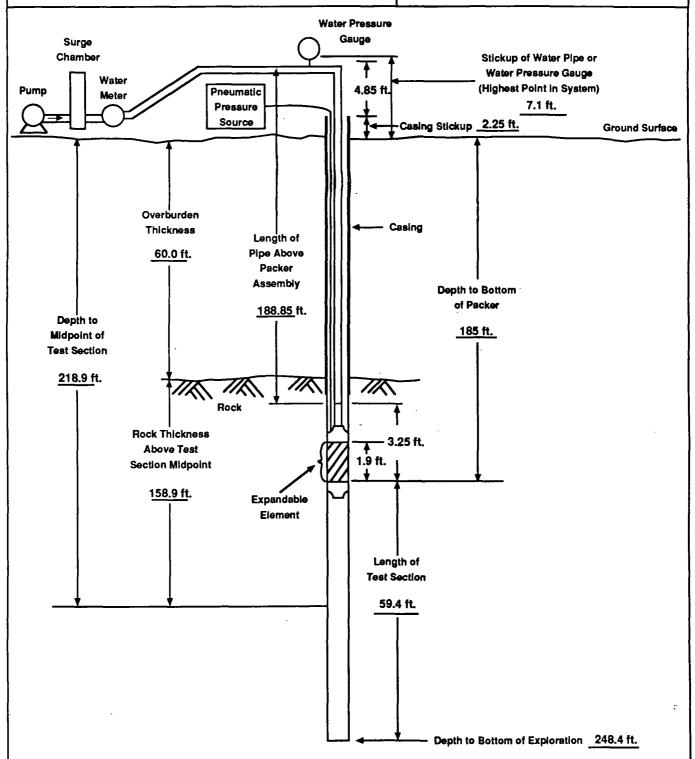
	ELAPSED	PACKER	GAUGE	METER	RATE OF	DEPTH TO		
TIME	TIME	PRESSURE	PRESSURE	READING	FLOW	WATER IN	REMARKS	
	(MIN)	(PSI)	(PSI)	(GALS)	(GALS / MIN)	CASING		
16:21	0.0	160	28.0	501.4	0.0	0.2	Purging system flowmeter reading	
16:22	1.0	160	28.0	501.5	0.1	0.2	433-501.5.	
16:23	2.0	160	28.0	501.5	0.0	0.2		
16:24	3.0	160	28.0	501.5	0.0	0.2		
16:25	4.0	160	56.0	501.5	0.0	0.2		
16:26	5.0	160	56.0	501.5	0.0	0.2		
16:27	6.0	160	56.0	501.5	0.0	0.2	Note: A total of 68.8 gallons	
16:28	7.0	160	56.0	501.6	0.1	0.2	Introduced during the pressure test.	
16:29	8.0	160	56.0	501.6	0.0	0.2	A total of 68.4 gallon of this was to	
16:30	0.0	160	84.0	501.6	0.0	0.0	flush system and fill casing.	
16:31	1.0	160	84.0	501.7	0.1	0.0		
16:32	2.0	160	84.0	501.7	0.0	0.0		
16:33	3.0	160.	84.0	501.7	0.0	0.0	* Pressure testing pipe and packer	
16:34	4.0	160	84.0	501.8	0.1	0.0	beginnning to rise a little due to	
16:35			3				pressure in corehole. Shut test	
							down; πο take.	



BORING NO. BW111 TEST NO. 2
SEC JOB NO. G-8026

PROJECT : MEDLEY FARMS RI/FS PHASE II PAGE 2 OF 2

CLIENT : MEDLEY FARMS STEERING COMMITTEE SEC REP. J. GILLESPIE



Note: Water pressure gauge should be a minimum of 6 pipe diameters away from any elbows or pipe constrictions.



SURGE CHAMBER DESCRIPTION _

CONTRACTOR:

WATER PRESSURE TEST

BORING NO. BW112 TEST NO. SEC JOB NO.: G-8026 PAGE: 1 OF

DATE START: 10/16/90 **DATE FINISH:** _10/16/90

Conventional Coring

PROJECT:	 FARMS RI/F	S PHASE II

MEDLEY FARMS STEERING COMMITTEE CLIENT:

DRILLER: P. Berman ATLANTA TESTING AND ENGINEERING SEC REP.: J. Gillespie

	PACKER	WATER	WATER PRESSURE	WATER	
	SYSTEM	METER	GAGE	PUMP	
TYPE	HQ	Flow	Standard	Screw	
MFG.	Tigre Tierra	Rockwell	Trerice	Moyno 3L6	
MODEL NO.	34B89-436	S-04	-		
I. D. NO.	•	42941689	100 psi		

WATER PIPE I. D. 1.25 TYPE Galvanized Cylinder with two ports

TEST INTERVAL (FT) 179.0 TO 199.0 Gneiss ROCK TYPE REMARKS Competent BOREHOLE DIAMETER (IN) **DRILLING METHOD**

STATIC WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE)

DATE	ELAPSED TIME (HRS)	WATER LEVEL	BOTTOM OF CASING	BOTTOM OF HOLE	REMARKS / PACKED OFF INTERVAL

CALCULATED HYDROSTATIC HEAD AT MIDPOINT OF TEST ZONE (PSI) = (DEPTH TO STATIC WATER LEVEL—DEPTH TO MIDPOINT OF TEST) x (0.43 PSI / FT)

	ELAPSED	PACKER	GAUGE	METER	RATE OF	DEPTH TO	
TIME	TIME	PRESSURE	PRESSURE	READING	FLOW	WATER IN	REMARKS
	(MIN)	(PSI)	(PSI)	(GALS)	(GALS / MIN)	CASING	
09:40				45.5			Begin purging system.
09:45	0.0	220	24.0	80.5	0.0	16.0	Inflate packer and begin test.
09:46	1.0	220	24.0	80.6	0.1	16.0	
09:47	2.0	220	24.0	80.6	0.0	16.0	
09:48	3.0	220	24.0	80.6	0.0	16.0	
09:49	4.0	220	24.0	80.6	0.0	16.0	
09:50	5.0	220	24.0	80.6	0.0	16.0	
09:51	6.0	220	24.0	80.7	0.1	16.0	
09:52	7.0	220	24.0	80.7	0.0	16.0	
09:53	8.0	220	24.0	80.7	0.0	16.0	<u> </u>
09:54	9.0	220	24.0	80.7	0.0	16.0	
09:55	0.0	220	48.0	80.8	0.1	16.0	
09:56	1.0	220	48.0	80.8	0.0	18.25	
09:57	2.0	220	48.0	80.9	0.1	18.25	
09:58	3.0	220	48.0	80.9	0.0	18.25	
09:59	4.0	220	48.0	81.0	0.1	18.25	



PROJECT	МЕ	DLEY FARM	<u> </u>	PAGE 2 OF 3						
SEC JOB NO. G-8026 BORING NO. BW112										
TEST NO1										
	ELAPSED	PACKER	GAUGE	METER	RATE OF	DEPTH TO				
TIME	TIME	l.	PRESSURE			WATER IN	REMARKS			
	(MIN)	(PSI)	(PSI)		(GALS / MIN)					
10:00	5.0	220	48.0	81.0	0.0	18.25				
10:01	6.0	220	48.0	81.0	0.0_	18.25				
10:02	7.0	220	48.0	81.0	0.0	20.6				
10:03	8.0	220	48.0	81.2	0.1	20.6				
10:04	9.0	220	48.0	81.2	0.0	20.6				
10:05	0.0	220	72.0	81.3	0.1	20.6				
10:06	1.0	220	72.0	81.4	0.1	21.6				
10:07	2.0	220	72.0	81.5	0.1	21.6				
10:08	3.0	220	72.0	81.55	0.05	21.6				
10:09	4.0	220	72.0	81.6	0.05	21.6	-			
10:10	5.0	220	72.0	81.65	0.05	22.6				
10:11	6.0	220	72.0	81.75	0.1	22.6				
10:12										
							A total of 36.25 gallons were			
							introduced during the pressure test.			
							A total of 35 gallons of this was to			
							flush the system and fill the casing.			



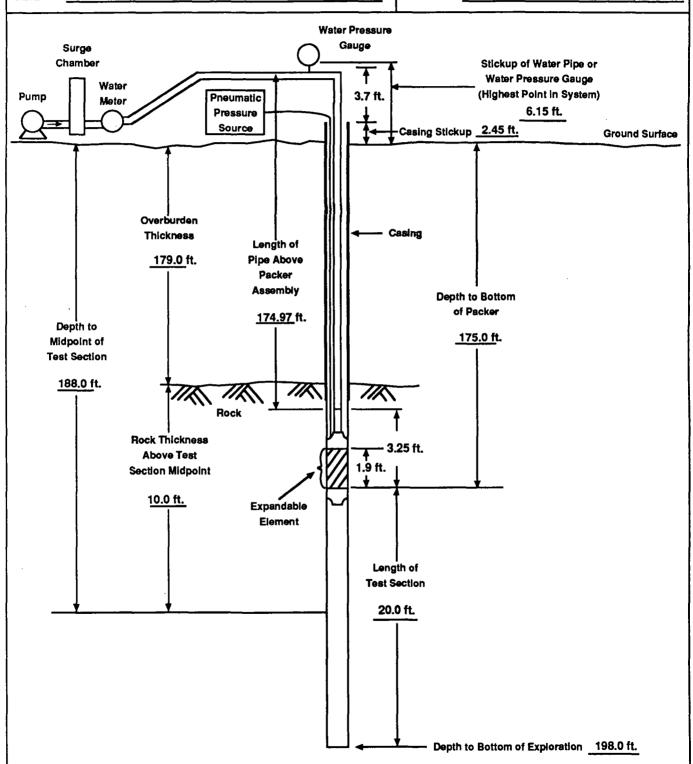
BORING NO. BW112 TEST NO. 1
SEC JOB NO. G-8026

PROJECT : MEDLEY FARMS RIFS PHASE II

PAGE 3 OF 3

CLIENT: MEDLEY FARMS STEERING COMMITTEE

SEC REP. J. GILLESPIE



Note: Water pressure gauge should be a minimum of 6 pipe diameters away from any elbows or pipe constrictions.



SURGE CHAMBER DESCRIPTION

PROJECT:

CONTRACTOR:

CLIENT:

WATER PRESSURE TEST

BORING NO. BW112 TEST NO. 2 SEC JOB NO.: G-8026

ROCK TYPE Amphibole Gneiss

PAGE: 1 OF **DATE START:** 10/24/90 **DATE FINISH:** 10/24/90

REMARKS

DRILLER: P. Berman ATLANTA TESTING AND ENGINEERING SEC REP.: J. Gillespie WATER TEST INTERVAL (FT) 179.0 TO 239.0

PACKER WATER WATER PRESSURE SYSTEM METER GAGE PUMP **TYPE** Standard Screw HQ Flow MFG. **Tigre Tierra** Rockwell **Trerice** Moyno MODEL NO. **3L6** 34B89-436 S-04 I. D. NO. 42941689 100 psi Galvanized WATER PIPE I. D. 1.25 TYPE

MEDLEY FARMS STEERING COMMITTEE

MEDLEY FARMS RI/FS PHASE II

BOREHOLE DIAMETER (IN) 3.75 DRILLING METHOD Wire Line Coring

DATE	ELAPSED TIME (HRS)	WATER LEVEL	BOTTOM OF CASING	BOTTOM OF HOLE	REMARKS / PACKED OFF INTERVAL
10-24-90	4	42.0	179.0	239.0	
		<u>. </u>	 		

STATIC WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE)

CALCULATED HYDROSTATIC HEAD AT MIDPOINT OF TEST ZONE (PSI) = (DEPTH TO STATIC WATER LEVEL—DEPTH TO MIDPOINT OF TEST) x (0.43 PSI / FT)

	ELAPSED	1 .	GAUGE	METER	RATE OF	DEPTH TO	
TIME	TIME	PRESSURE	PRESSURE	READING	FLOW	WATER IN	REMARKS
	(MIN)	(PSI)	(PSI)	(GALS)	(GALS / MIN)	CASING	
14:40				418.0			Begin purging system.
	<u> </u>						
14:41	0.0	160	27.0	432.4	0.0		Water remaining static in
14:42	1.0	160	27.0	432.4	0.0		casing. No bubbling.
14:43	2.0	160	27.0	432.4	0.0		
14:44	3.0	160	27.0	432.4	0.0		
<u></u>		<u></u>					
14:45	0.0	160	54.0	432.5	0.1		·
14:46	1.0	160	54.0	432.6	0.1_		
14:47	2.0	160	54.0	432.6	0.0_	<u></u>	
14:48	3.0	160	54.0	432.7	0.1		
	ļ						<u> </u>
14:49	0.0	160	81.0	432.9	0.2		
14:50	1.0	160	81.0	432.9	0.0		
14:51	2.0	160	81.0	432.9	0.0		



CONSULTANTS										
PROJECT MEDLEY FARMS RI/FS PHASE II PAGE 2 OF 3										
SEC JOB NO. G-8026 BORING NO. BW112										
TEST NO. — 2										
	FLAPSED	PACKER	GAUGE	METER	RATE OF	DEPTH TO				
*****	TIME		PRESSURE			WATER IN	DEMARKS			
TIME	(MIN)	(PSI)	(PSI)		(GALS / MIN)		REMARKS			
14:52	3.0	160	81.0	433.1	0.2					
14:53	4.0	160	81.0	433.1	0.0					
14:55				433.1	0.0		End of test			
							A total of 15.1 gallons were			
							introduced during the No. 2			
							pressure test.			
							A total of 14.4 gallons of this was to			
			<u> </u>				fill the casing and flush the system.			
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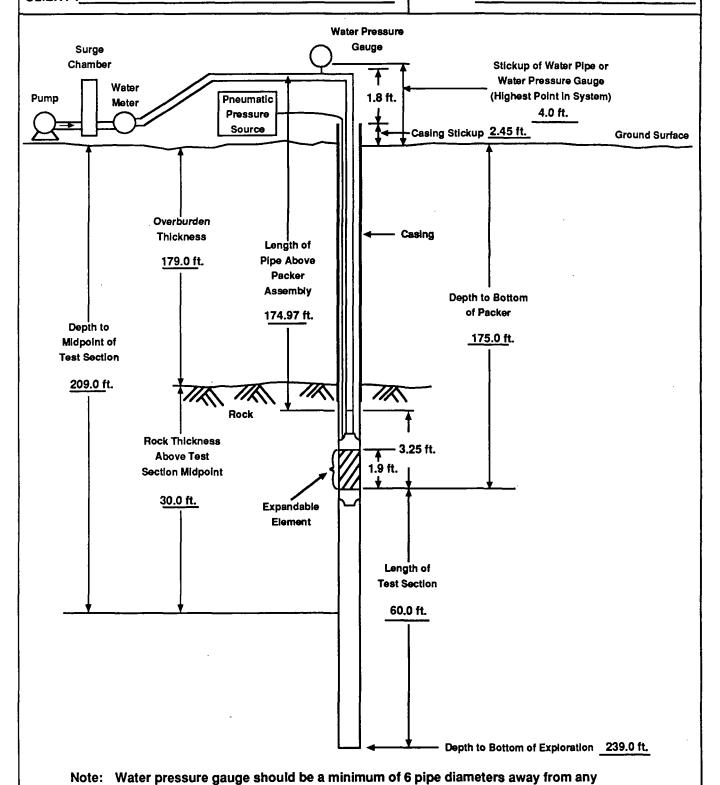


WATER PRESSURE TEST ASSEMBLY SINGLE PACKER TEST

BORING NO. BW112 TEST NO. 2
SEC JOB NO. G-8026

PROJECT : MEDLEY FARMS RI/FS PHASE II PAGE 3 OF 3

CLIENT : MEDLEY FARMS STEERING COMMITTEE SEC REP. J. GILLESPIE



elbows or pipe constrictions.

APPENDIX H
SLUG TEST DATA

()

SUMMARY OF FIELD PERMEABILITY TEST RESULTS

SLUG TEST ANALYSIS - MODIFIED BOUWER-RICE METHOD

Client:

MEDLEY FARM RI/FS

Location:

GAFFNEY, SOUTH CAROLINA

Job Number: G-8026

Porosity of the sand pack:

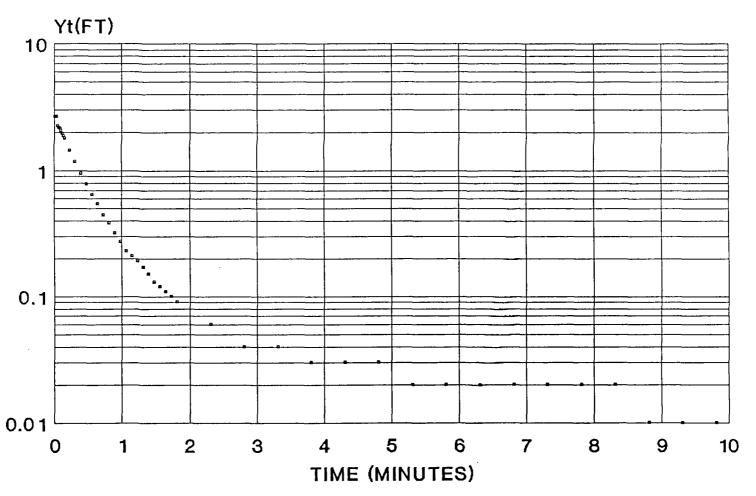
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Well																	
Number	Rc(ft)	rc'(ft)	Le(f1)	rw(ft)	Le/rw	Lw(ft)	H(f1)	Α	В	С	yo(tı)	yt(ft)	t(sec)	K(fi/sec)	K(ft/day)	K(cm/sec)	T(gpd/ft)
BW1-F	0.158	0.158	9.20	0.158	58.23	44,44	50.0	3.208	0.533	2.916	0.963	0.010	208.20	1.05E-04	9.10	3.21E-03	3,402
BW1-R	0.158	0.158	9.20	0.158	58.23	44.44	50.0	3.208	0.533	2.916	1.844	0.010	178.20	1.40E-04	12,14	4.28E-03	4,539
BW2-F	0.158	0.158	20.64	0.158	130.63	18.36	50.0	4.875	0.840	4.875	0.471	0.010	102.60	7.50E-05	6.48	2.29E-03	2,424
BW2-R	0.158	0.158	20.64	0.158	130.63	18.36	50.0	4.875	0.840	4.875	0.500	0.010	109.80	7.12E-05	6,15	2.17E-03	2,300
BW3-F	0.158	0.158	20.00	0.158	126.58	48.84	50.0	4.833	0.791	4.833	2.850	0.010	219.00	6.64E-05	5.74	2.02E-03	2,147
BW3-R	0.158	0.158	20.00	0.158	126.58	48.84	50.0	4.833	0.791	4.833	3.350	0.010	252.00	5.94E-05	5.13	1.81E-03	1,919
BW4-F	0.158	0.158	13.00	0.158	82.28	25.94	50.0	3.933	0.646	3.666	2.150	1.160	300.00	6.52E-06	0.56	1.99E-04	211
BW4-R	0.158	0.158	13.00	0.158	82.28	25.94	50.0	3.933	0.646	3.666	2.111	0.900	480.00	5.63E-06	0.49	1.72E-04	182
SW1-R	0.083	0.238	15.20	0.416	36.54	8.28	50.0	2.600	0.396	2.266	0.073	0,060	600.00	1.25E-06	0.11	3.80E-05	40
SW3-R	0.083	0.238	15.20	0.416	36.54	8.76	50.0	2.600	0.396	2.266	0.208	0.100	111.00	2.56E-05	2.21	7.79E-04	826
SW4-R	0.083	0.238	15.20	0.416	36.54	8.34	50.0	2.600	0.396	2.266	0.175	0.148	120.00	5.34E-06	0.46	1.63E-04	173
SW102-R	0.083	0.238	8.65	0.416	20.79	8.65	50.0	2.210	0.350	1.710	0.253	0.090	120.00	5.17E-05	4.47	1.58E-03	1,671
SW103-R	0.083	0.238	7.38	0.416	17.74	7.38	50.0	2.120	0.330	1.570	0.166	0.131	420.00	3.69E-06	0.32	1.12E-04	119
SW104-R	0.083	0.238	11.63	0.416	27.96	11.63	50.0	2.430	0.396	2.000	1.000	0.090	480.00	2.54E-05	2.20	7.75E-04	822
SW106-R	0.083	0.238	13.72	0.416	32.98	13.72	50.0	2.590	0.420	2.190	0.900	0.070	420.00	2.79E-05	2.41	8.51E-04	903
SW108-R	0.083	0.238	13.76	0.416	33.08	13.76	50.0	2.590	0.420	2.200	1.250	0.600	3360.00	1.00E-06	0.09	3.05E-05	32
SW109-R	0.083	0.238	7.26	0.416	17.45	7.26	50.0	2.110	0.330	1.560	1.270	0.217	120.00	9.70E-05	8.38	2.96E-03	3,134

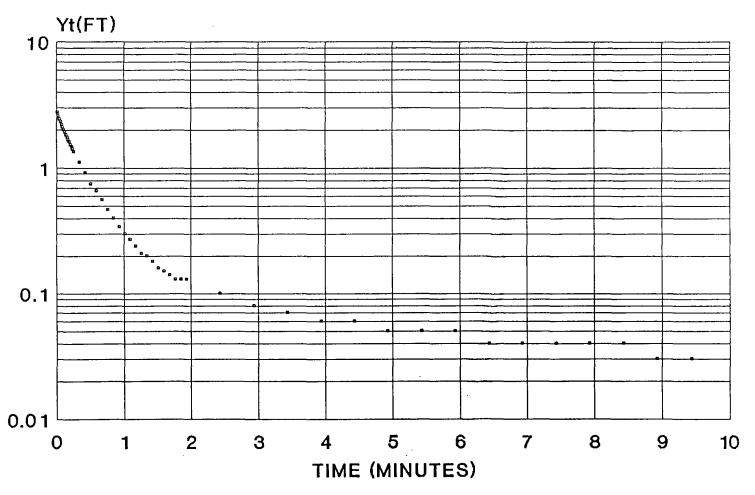
F=INDICATES FALLING HEAD SLUG TEST

R=INDICATES RISING HEAD SLUG TEST

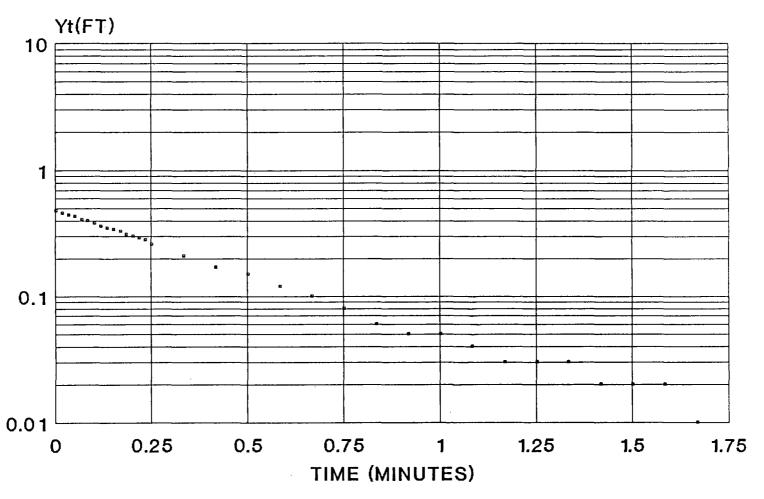
MEDLEY FARM RI/FS FALLING HEAD SLUG TEST FOR BW1



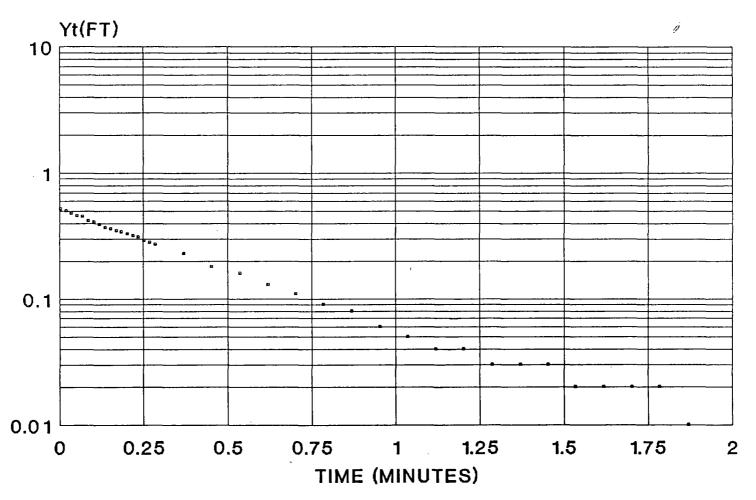
MEDLEY FARM RI/FS RISING HEAD SLUG TEST FOR BW1



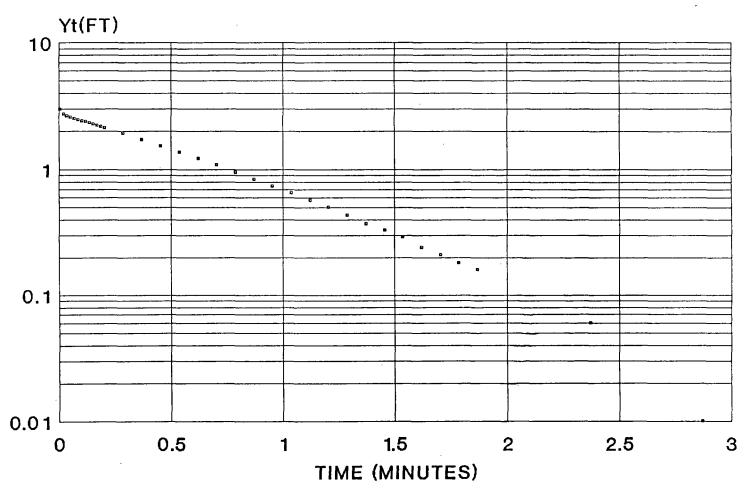
MEDLEY FARM RI/FS FALLING HEAD SLUG TEST FOR BW2



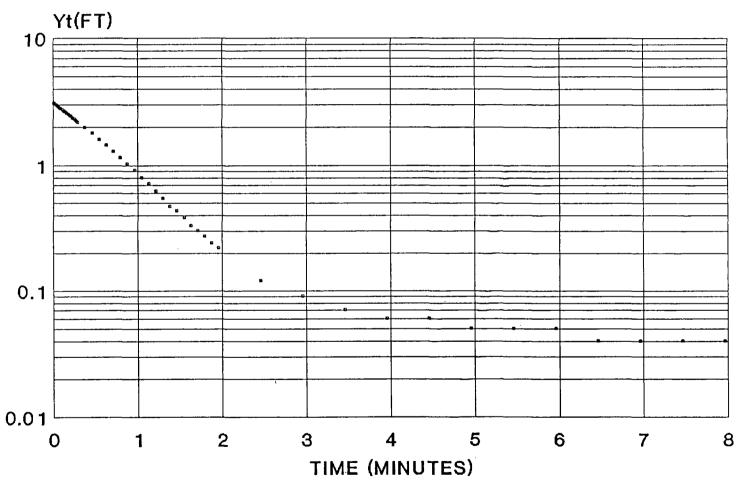
MEDLEY FARM RI/FS RISING HEAD SLUG TEST FOR BW2



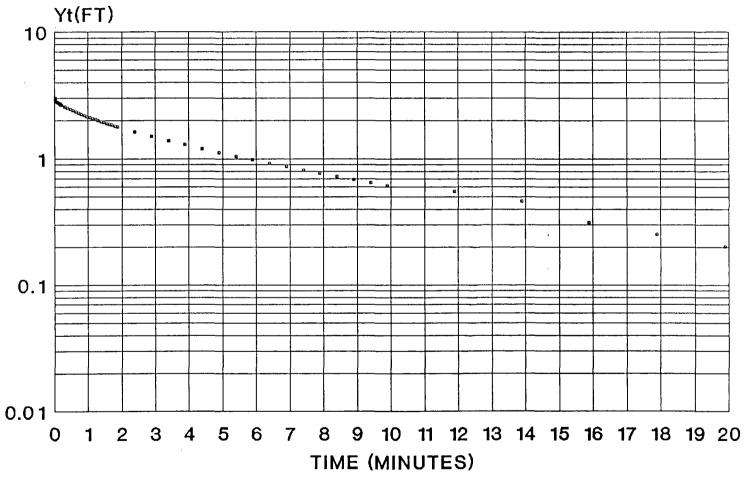
MEDLEY FARM RI/FS FALLING HEAD SLUG TEST FOR BW3



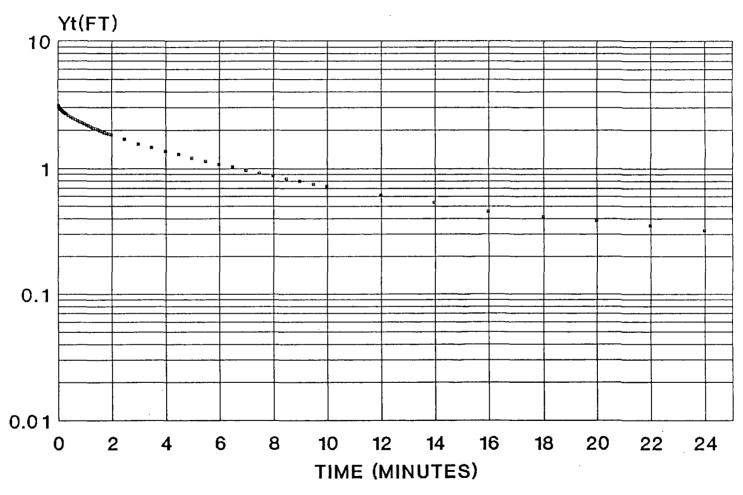
MEDLEY FARM RI/FS RISING HEAD SLUG TEST FOR BW3



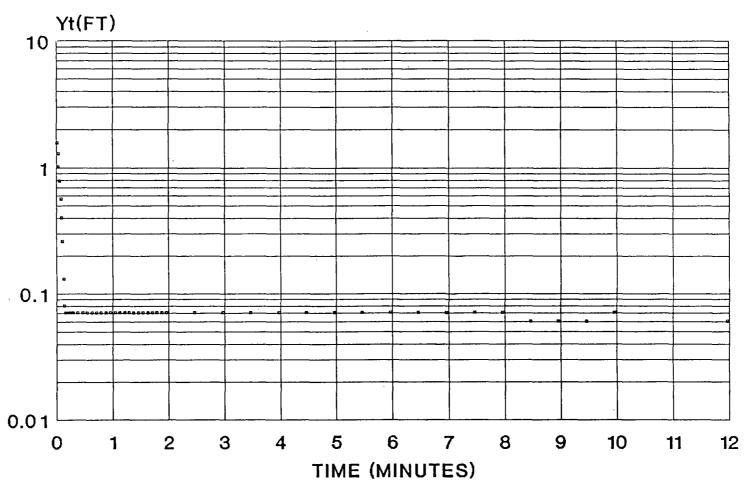
MEDLEY FARM RI/FS FALLING HEAD SLUG TEST FOR BW4



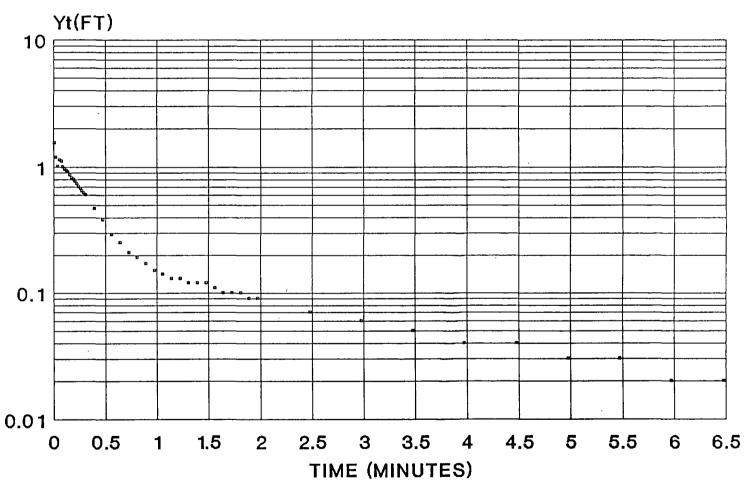
MEDLEY FARM RI/FS RISING HEAD SLUG TEST FOR BW4



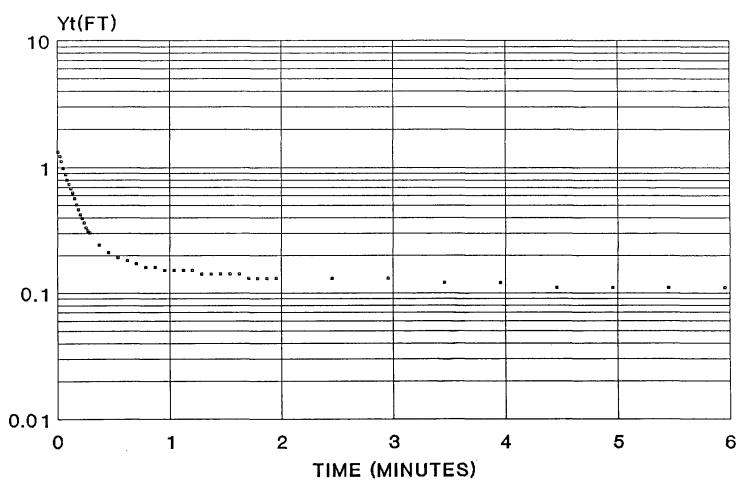
MEDLEY FARM RI/FS RISING HEAD SLUG TEST FOR SW1



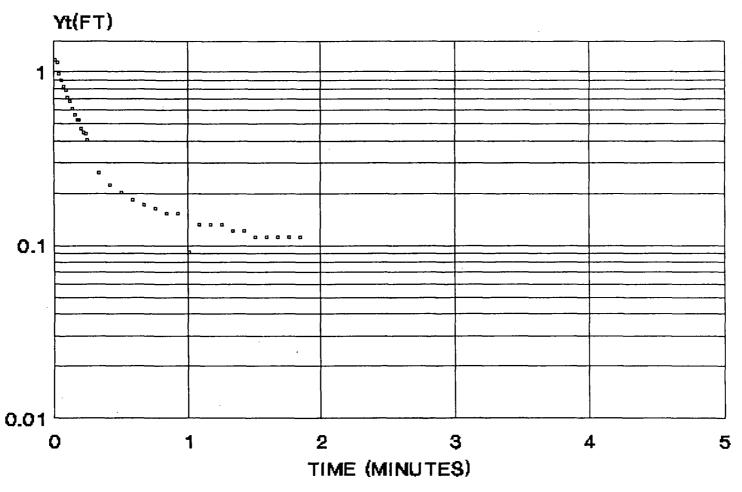
MEDLEY FARM RI/FS RISING HEAD SLUG TEST FOR SW3



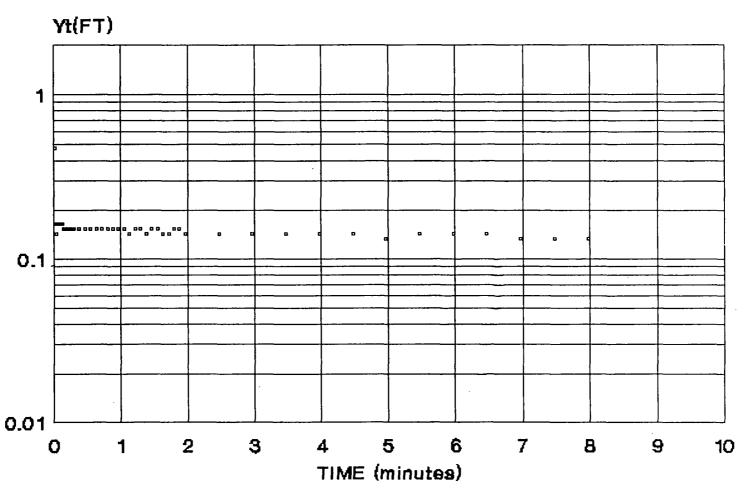
MEDLEY FARM RI/FS RISING HEAD SLUG TEST FOR SW4



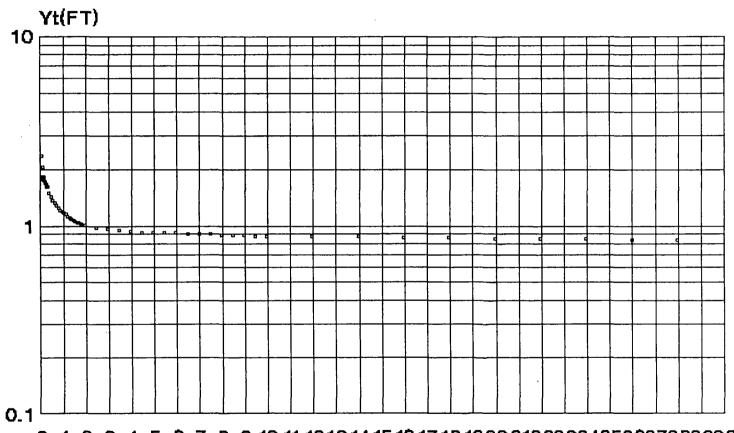
MEDLEY FARMS , GAFFNEY , SC SLUG TEST FOR WELL \$W102



MEDLEY FARMS GAFFNEY,SC SLUG TEST FOR WELL SW103

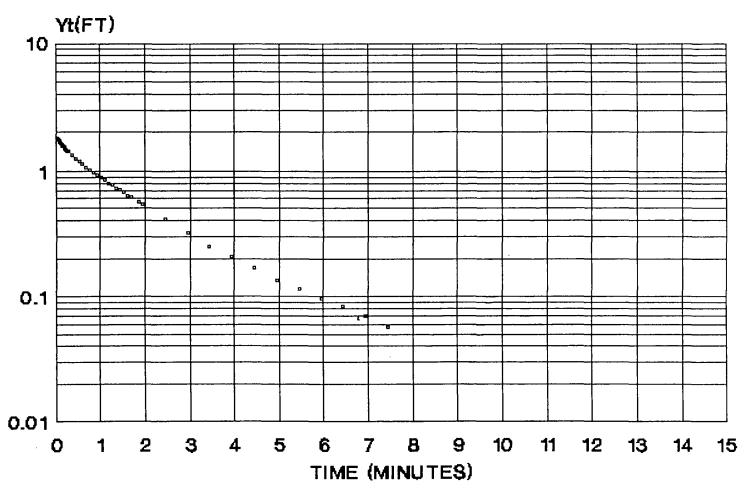


MEDLEY FARMS GAFFNEY, SC SLUG TEST FOR WELL SW104

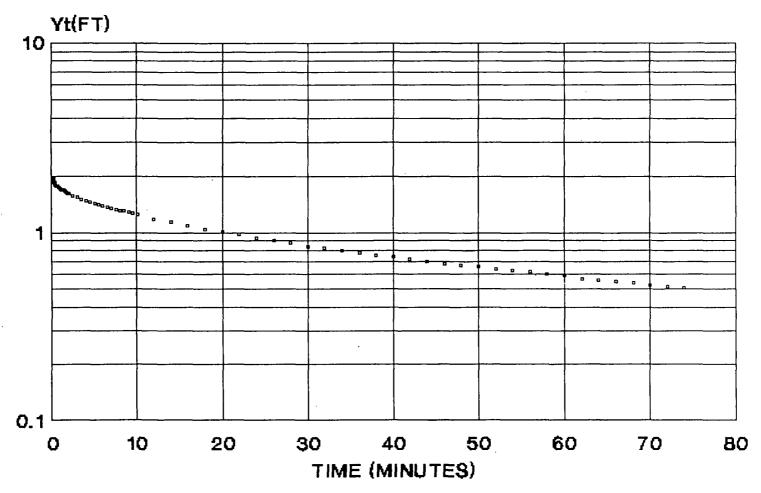


0 1 2 3 4 5 6 7 8 9 10 11 12131415161718192021222324252627282930 TIME (MINUTES)

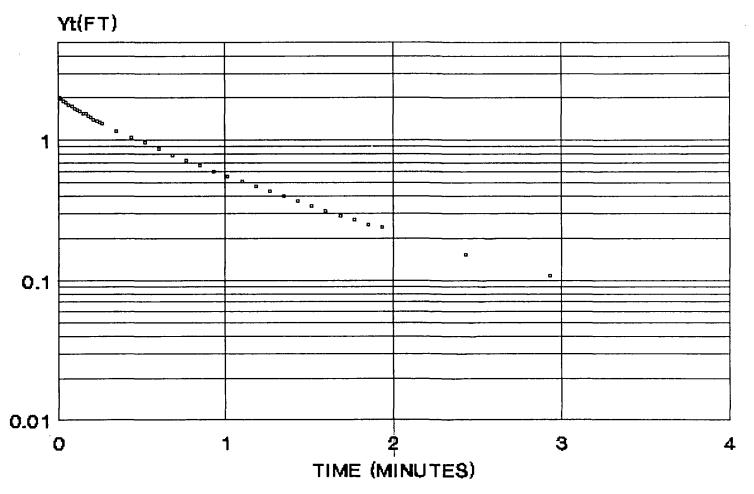
MEDLEY FARMS GAFFNEY,SC SLUG TEST FOR WELL SW106



MEDLEY FARMS GAFFNEY ,SC SLUG TEST FOR WELL SW108



MEDLEY FARMS GAFFNEY ,SC SLUG TEST FOR WELL \$W109



APPENDIX I

FIELD DATA INFORMATION LOGS

FOR GROUND-WATER SAMPLING

Date (vr/mo/day) 90/	1/0		Casing Diameter	2.0				
	· · · · · · · · · · · · · · · · · · ·		Casing Diameter		Inche			
i	TWILER/OVERBY			n. 40 PVC & Stainless Steel				
	DLEY FARMS RI/FS - PHASE I		Measuring Point Elevation		1/100			
GEC Job #G-{			Height of Riser (above land surface)		1/100			
Well ID #SV			Land Surface Elevation		1/100			
X Upgradient D	•		Screened Interval	41.9 - 65.0	1/100			
Weather Conditions		<u> </u>	Dedicated Pump or Bailer YESN	O <u>X T</u> ype				
Air Temperature	62° F	<u>°C</u>	Steel Guard Pipe Around Casing YES	<u>x</u> NO				
Total Well Depth (TWD) =	62	1/100 ft	Locking Cap YES X NO					
Depth to Ground Water (DGW) =	51.32	1/100 ft	Protective Post/Abutment YES NO X					
ength of Water Column (LWC)	= TWD - DGW = 10.68	1/100 ft	Well Integrity Satisfactory YES X N	o				
1 Casing Volume (OCV) = LWC	x 0.163 = 1.74	gal	Well Yield LOW X MODERATE	_HIGH				
5 Casing Volumes =	8,7 gal = Standar	d Evacuation Volume	RemarksWell bailed dry at 2 gallons					
Method of Well Evacuation	Tetion Bailer							
Method of Sample Collection	Teflon Baller							
Total Volume of Water Removed	1 2	gal						
		FIELD	ANALYSES					
/OLUME PURGED (gallons)	2.0							
ΓΙΜΕ (military)	16:35							
oH (S.U.)	4.0							
Eh	•							
Sp. Cond. (μmhos/cm)	1110							
Water Temp. (°C)	14							
rrater remp. (C)								

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0000000 0000006 (000006)	ENVIRONMENT	
	CONSULTAN	TS

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Date (yr/mo/day)	90/9/18			Casing Diameter		2.0	Inche		
Field Personnel D. De	twiler			Casing Material Sch. 40 PVC and Stainless Steel Screen					
Site Name Medic	y Farms RI/FS - I	Phase II		Measuring Point Elevation	 n	690.47 TOC	1/100		
SEC Job # G-802	26			Height of Riser (above la	`	2.40	1/100		
Well ID # SW1				Land Surface Elevation			1/100		
X Upgradient Do	wngradient			Screened Interval		44.20-59.40	1/100		
Weather Conditions	Clear, Mild			Dedicated Pump or Baile		Type			
Air Temperature			~	Steel Guard Pipe Around					
Total Well Depth (TWD) =		61.80 TOC	1/100 ft	Locking Cap YES X					
Depth to Ground Water (DGW) =			1/100 ft	Protective Post/Abutmen		X			
Length of Water Column (LWC) =			1/100 ft	Well Integrity Satisfactor					
1 Casing Volume (OCV) = LWC 2			gal	Well Yield LOW X					
5 Casing Volumes = 9.		= Standard Evacuati		Remarks					
Method of Well Evacuation									
Method of Sample Collection		efion Bailer	<u> </u>						
Total Volume of Water Removed			gal						
- ii									
			FIELD	ANALYSES			<u> </u>		
VOLUME PURGED (gallons)	2	4	6	8	10	1600			
TIME (military)	1505	1530	1540	1555	1600	Sample			
рH (S.U.)	6.6	6.6	6.55	6.75	6.7	Taken			
Eh (mV)				-					
Sp. Cond. (µmhos/cm)	90	120	110	110	110				
Water Temp. (°C)	17	17	17	16	16				
TURBIDITY (subjective) *	> 100 NTU	> 100 NTU	> 100 N	TU > 100 NTU	> 100 NTU				
	440.441.1								
*(1) Clear (2) Slight (3) Moderat	e (4) High								

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Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Date (yr/mo/day) 89/8	/8			Casing Diameter	2.0	inches
Field Personnel HUN	IT/DETWILER			Casing Material Sch. 40 i	PVC and Stainless Steel Sc	reen
Site Name MED	LEY FARMS RI/FS I	PHASE IA		Measuring Point Elevation	671.56	1/100 ft
SEC Job # G-80	126			Height of Riser (above land surface)	2.0	1/100 ft
Well ID #SW-	-3			Land Surface Elevation		1/100 ft
Upgradient_XDo	wngradient		į	Screened Interval 61.8 to 77.0		1/100 f
Weather Conditions	CLEAR			Dedicated Pump or Baller YESNO		
Air Temperature	70° F	- <u>-</u>	<u>°C</u>	Steel Guard Pipe Around Casing YES		
Total Well Depth (TWD) =	77.0		1/100 ft	Locking Cap YES X NO		
Depth to Ground Water (DGW) =	66.96		1/100 ft	Protective Post/Abutment YESNO		
Length of Water Column (LWC) =	TWD - DGW =	10.04	1/100 ft	Well Integrity Satisfactory YES X NO		
1 Casing Volume (OCV) = LWC >	.1632 =	1.63	gal	Well Yield LOW X MODERATE H	IGH	
5 Casing Volumes = 8.1	5 gal :	Standard Evacuati	on Volume	Remarks		
Method of Well Evacuation	Tetion Baller					
Method of Sample Collection	Tetion Bailer					
Total Volume of Water Removed	5.1		gal			
			FIELD	ANALYSES		
VOLUME PURGED (gallons)	1.7	1.7	1.7			
TIME (military)	13:01	13:07	13:15			
pH (S.U.)	7.2	7.04	6.81			
Eh	<u>-</u>	<u>-</u>	-			
Sp. Cond. (μmhos/cm)	84	80	80			
Water Temp. (°C)	16.9	16.5	16.7			
TURBIDITY (subjective) *	4	4	44			
* (1) Clear (2) Slight (3) Moderate	e (4) High					
OMMENTS/OBSERVATIONS:	DAIL ED DOV AT 2 V	OLUMES LET WEL	L BECOVER A	10.044101.50		

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Date (yr/mo/day) 90/	1/9	<u> </u>	Casing Diameter	2.0	inches
Field Personnel DE			Casing Material		niches
Site NameME					1/100 6
SEC Job # G-8			Measuring Point Elevation		1/100 ft
			Height of Riser (above land surface)		1/100 ft
Well ID # SV Upgradient X Do			Land Surface Elevation		1/100 ft
	•		Screened Interval	· · · · · · · · · · · · · · · · · · ·	1/100 ft
Weather Conditions			Dedicated Pump or Bailer YES _		
Air Temperature		<u>°C</u>	Steel Guard Pipe Around Casing	YES X NO	
Total Well Depth (TWD) =		1/100 ft	Locking Cap YES X NO		
Depth to Ground Water (DGW) =		1/100 ft	Protective Post/Abutment YES _		
Length of Water Column (LWC)			Well Integrity Satisfactory YES _	<u>х_</u> ио	
1 Casing Volume (OCV) = LWC			Well Yield LOW X MODERAT	EHIGH	
5 Casing Volumes =	6.98 gal :	Standard Evacuation Volume	Remarks Well bailed dry at 5.5 (gallons	
Method of Well Evacuation	Teflon Bailer				
Method of Sample Collection	Teflon Bailer	*****		·	
Total Volume of Water Removed	5.5	gal	J L		
		FIEL	D ANALYSES		
VOLUME PURGED (gallons)	5.5		· · · · · · · · · · · · · · · · · · ·		
TIME (military)	15:40				
pH (S.U.)	5.0				
Eh	-				
Sp. Cond. (μmhos/cm)	1200				
Water Temp. (°C)	14				
TURBIDITY (subjective) *	2	L			:
* (1) Clear (2) Slight (3) Modera	te (4) High	·····			
COMMENTS/OBSERVATIONS:				·	
					

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Date (yr/mo/day)	90/9/25			Casing Diameter	2.0	Inches
	twiler, S. Asquit			Casing Material	Sch. 40 PVC and Stainless Stee	el Screen
Onto Hullio	y Farms RI/FS - F	hase II		Measuring Point Elevation	671.56 TOC	1/100 ft
SEC Job # G-802	6	· · · · · · · · · · · · · · · · · · ·		Height of Riser (above land surface)	2.08	1/100 ft
Well ID #SW3				Land Surface Elevation	669.90	1/100 ft
UpgredientX_Do	wngradient			Screened Interval	61.79-77.00	1/100 ft
Weather Conditions	Clear	<u></u>		Dedicated Pump or Baller YES		
Air Temperature	20		<u>°C</u>	Steel Guard Pipe Around Casing	YES X NO	
Total Well Depth (TWD) =		79.08 TOC	1/100 ft	Locking Cap YES X NO		
Depth to Ground Water (DGW) =		67.04 TPC	1/100 ft	Protective Post/Abutment YES	NOX	
Length of Water Column (LWC) =	TWD - DGW =	12.04	1/100 ft	Well integrity Satisfactory YES _	X _{NO}	
1 Casing Volume (OCV) = LWC x	0.163 =	1.96	gal	Well Yield LOW X MODERATE	HIGH	
5 Casing Volumes = 9.8	81 gal :	Standard Evacuati	on Volume	Remarks		
Method of Well Evacuation	Teflon	Bailer				
Method of Sample Collection	Teflon	Bailer				
Total Volume of Water Removed	6		gal			
			FIELD	ANALYSES		
VOLUME PURGED (gallons)	2	4	6			
TIME (military)	14:50	14:56	15:05	·		
pH (S.U.)	5.80	5.81	5.93			
Eh (mV)						
Sp. Cond. (µmhos/cm)	74	74	74			
Water Temp. (°C)	12.8	12.8	12.9			
TURBIDITY (subjective)	2	<u> 2 </u>	3			
* (1) Clear (2) Slight (3) Moderate	e (4) High					
OMMENTS/OBSERVATIONS:	1et turbidity >10	0. 2nd turbidity >	100 · 3rd turbi	dity >100		

Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Date (yr/mo/day) 89/8	/8			Casing Dlameter	2.0	Inches			
Field Personnel HUI	NT/DETWILER			Casing Material	Sch. 40 PVC and Stainless Steel Scre	en			
Site Name MEI	DLEY FARMS RI/FS	PHASE IA		Measuring Point Elevation	671.39	1/100 ft			
SEC Job #G-8	026			Height of Riser (above land surf		1/100 ft			
Well ID #SW	-4			Land Surface Elevation		1/100 ft			
Upgradient X Do	wngradient			Screened Interval 53.		1/100 ft			
Weather Conditions	CLEAR				SNO _X Type				
Air Temperature	70° F		•€	Steel Guard Pipe Around Casing					
Total Well Depth (TWD) =			1/100 ft	Locking Cap YES X NO _					
Depth to Ground Water (DGW) =			1/100 ft	Protective Post/Abutment YE					
Length of Water Column (LWC) =			1/100 ft	Well Integrity Satisfactory YES X NO					
1 Casing Volume (OCV) = LWC	x .1632 =	1.75	gal	Well Yield LOW MODER					
5 Casing Volumes = 8.7	'5 gal:	= Standard Evacuati	on Volume	Remarks					
Method of Well Evacuation	Teflon Baller					*****			
Method of Sample Collection									
Total Volume of Water Removed			gal						
			FIELD	ANALYSES					
VOLUME PURGED (gallons)	1.75	1.75	1.75	1.75	1.75				
TIME (military)	14:47	14:53	15:01	15:07	15:14				
pH (S.U.)	6.84	6.72	6.61	6.61	6.59				
Eh	-	-	·	-	-				
Sp. Cond. (μmhos/cm)	160	164	147	141	134				
Water Temp. (°C)	18.2	17.5	17.2	17.0	16.5				
TURBIDITY (subjective) *	4	4	4	4	4				

*(1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS:

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date (yr/mo/day) 90/1	/9	 		Casing Diameter	2.0	inche
Field Personnel DET	WILER/OVERBY			Casing MaterialS	ch. 40 PVC & Stainless Steel	
Site NameMED	LEY FARMS RIFS	- PHASE IB		Measuring Point Elevation	671.39	1/100 1
SEC Job #G-80	26	·		Height of Riser (above land surface)		1/100
Well ID # SW-	-4		J	Land Surface Elevation		1/100
UpgradientX_Do	wngradient			Screened Interval		1/100
Weather Conditions	OVERCAST			Dedicated Pump or Bailer YES		
Air Temperature	45 ° F		<u>°C</u>	Steel Guard Pipe Around Casing YES		
Total Well Depth (TWD) =	68.3		1/100 ft	Locking Cap YES X NO	_	
Depth to Ground Water (DGW) =			1/100 ft	Protective Post/Abutment YES	NO <u>X</u>	
Length of Water Column (LWC) =	TWD - DGW =	8.03	1/100 ft	Well integrity Satisfactory YES X	 NO	
1 Casing Volume (OCV) = LWC x	.163 =	1.31	gal	Well Yield LOW X MODERATE	-	
5 Casing Volumes =			stion Volume	Remarks		
Method of Well Evacuation						
Method of Sample Collection	Teflon Bailer					
Total Volume of Water Removed	6.54		gal			
			FIELD	ANALYSES		
VOLUME PURGED (gallons)	5.24	6.54				
TIME (military)	12:22	12:35				
pH (S.U.)	6.24	6.24				
Eh	·	-				
Sp. Cond. (μmhos/cm)	425	130				
Water Temp. (°C)	13	13				
TURBIDITY (subjective) *	3	2				
* (1) Clear (2) Slight (3) Moderate	e (4) High					
OMMENTS/OBSERVATIONS:					· · · · · · · · · · · · · · · · · · ·	······································

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Date (yr/mo/day)	90/9/25			Casing Diameter		2.0	inches
Field Personnel D. De				Casing Material	Sch. 40	PVC and Stainless Stee	el Screen
Site Name Medic	y Farms RI/FS - F	hase II		Measuring Point Elevatio			1/100 ft
SEC Job # G-802	<u> </u>			Height of Riser (above la	nd surface)	3.20	1/100 ft
Well ID #SW4				Land Surface Elevation		668.68	1/100 ft
UpgradientXDo	• .			Screened Interval			1/100 ft
Weather Conditions	Clear			Dedicated Pump or Baile	YESNO	X Type	
Air Temperature	20		<u>°C</u>	Steel Guard Pipe Around	Casing YES X	NO	
Total Well Depth (TWD) =		71.5 TOC	1/100 ft	Locking Cap YES X	NO		
Depth to Ground Water (DGW) =			1/100 ft	Protective Post/Abutmen	YESNO	<u>x</u>	
Length of Water Column (LWC) =	TWD - DGW =	14.58	1/100 ft	Well Integrity Satisfactor	YES X NO		
1 Casing Volume (OCV) = LWC >	0.163 =	2.38	gai	Well Yield LOW X	ODERATEH	 GH	
5 Casing Volumes =11	l.88 gal :	: Standard Evacuati	on Volume	Remarks			
Method of Well Evacuation	Teflon I	Bailer					
Method of Sample Collection	Teflon I	Baller					
Total Volume of Water Removed	12		gal				
			FIELD A	NALYSES		· 	
VOLUME PURGED (gallons)	2.5	5	7.5	10	12		
TIME (military)	13:05	13:15	13:35	13:42	13:50		
pH (S.U.)	5.65	5.80	5.67	5.68	5.65		
Eh (mV)	••						
Sp. Cond. (μmhos/cm)	229	116	100	95	89		
Water Temp. (°C)			14.0	13.8	13.8	ļ	
TURBIDITY (subjective) *	2	2	22	2	3	<u>il</u>	
* (1) Clear (2) Slight (3) Moderat	e (4) High						
DMMENTS/OBSERVATIONS:							



inches

1/100 ft 1/100 ft 1/100 ft 1/100 ft

	4		4
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P.O. Box 24000 Greenville, SC 29616

Date (yr/mo/day)90/9/6			Casing Diameter	2.0
Field Personnel R. Enright, R. Burdine				Sch. 40 PVC and Stainless Steel Sc
Site Name Medley Farms RI/FS - Pha	ise II		Measuring Point Elevation	
SEC Job#G-8026			Height of Riser (above land sur	
Well ID #SW101			Land Surface Elevation	
UpgradientX_Downgradient			Screened Interval	
Weather Conditions Clear, Hot, Humid	·		Dedicated Pump or Bailer Y	
Air Temperature 26.4		<u>•c</u>	Steel Guard Pipe Around Casir	ng YES X NO
Total Well Depth (TWD) =	36.85 TOC	1/100 ft	Locking Cap YES X NO	
Depth to Ground Water (DGW) =	33.02 TOC	1/100 ft	Protective Post/Abutment Y	ESNO X
Length of Water Column (LWC) = TWD - DGW =	3.83	1/100 ft	Well Integrity Satisfactory Y	ES X NO
1 Casing Volume (OCV) = LWC x 0.163 =	0.62	gal	Well Yield LOW X MODE	RATEHIGH
5 Casing Volumes = 3.12 ga	l = Standard Evacuat	ion Volume	Remarks	
Method of Well Evacuation	efion Bailer			
Method of Sample Collection To	efion Bailer			
Total Volume of Water Removed	4.5	gal		

FIELD ANALYSES								
VOLUME PURGED (gallons)	2.5	3.0	3.5	4.0	4.5			
TIME (military)	1331	1337	1343	1348	1352			
pH (S.U.)	6.71	6.76	6.76	6.63	6.54			
Eh (mV)								
Sp. Cond. (µmhos/cm)	181.6	162.7	167.0	171.8	166.4			
Water Temp. (°C)	20.0	18.3	18	17.8	17.9			
TURBIDITY (subjective) *	2	2	2	2	2			

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: Sampled well at 1355. Sample identification was SW101-1.



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Date (yr/mo/day) _	90/9/26		c	asing Diameter		2.0	inche
	wiler, S. Asquith		d	asing Material	Sch. 40	PVC and Stainless Stee	l Screen
Site Name Medle	y Farms RI/FS - I	Phase II	N	leasuring Point Elevati	on	604.18 TOC	1/100
SEC Job # G-8020	6		1 1	eight of Riser (above is			1/100
Well ID #SW101	<u> </u>			and Surface Elevation			1/100
Upgradient_X_Dov			s	creened Interval		23.85-33.85	1/100
Weather Conditions	Clear			edicated Pump or Baile	er YESNO	X _{Туре}	
Air Temperature	25		<u>°C</u> s	teel Guard Pipe Aroun	d Casing YES X	_NO	
Total Well Depth (TWD) =		37.05 TOC	1/100 ft L	ocking Cap YES X	on		
Depth to Ground Water (DGW) =		32.82 TOC	1/100 ft P	rotective Post/Abutme	nt YESNO	<u>x</u>	
Length of Water Column (LWC) =	TWD - DGW =	4.23	<u>1/100 ft</u> V	/ell integrity Satisfacto	ry YES X NO	<u> </u>	
1 Casing Volume (OCV) = LWC x	163 =	.69	gal V	veli Yield LOW X	MODERATEHI	GH	
5 Casing Volumes = 3.4	5 gal	= Standard Evacuation	on Volume F	emarks			
Method of Well Evacuation	Teflon	Bailer	.				
Method of Sample Collection	Teflon	Baller					
Total Volume of Water Removed	3.9	5	gal				
		 ,	FIELD ANA	LYSES			**
VOLUME PURGED (gallons)	.7	1.5	2.1	2.8	3.5		
TIME (military)	12:33	12:47	13:00	13:14	13:21		
pH (S.U.)	6.39	6.60	6.61	6.60	6.57		
Eh (mV)							
Sp. Cond. (µmhos/cm)	165	166	168	164	163		
Water Temp. (°C)	13.0	12.5	12.5	12.3	12.5	<u> </u>	 .
TURBIDITY (subjective) *	4	44	3	2	2	<u> </u>	
* (1) Clear (2) Slight (3) Moderate	(4) High						
DMMENTS/OBSERVATIONS:					400 011 1 1 1 1 1	100	



_	1		1
rage	•	of	•

Date (yr/mo/day) 90/8/29		·		Casing Diameter			inche
Teld Personnel S. Asquith				Casing Material	Sch. 40 PVC	and Stainless Steel S	creen
Site Name Medley Fa	rms HI/FS - Phas	30 II		Measuring Point Elevat	ilon	620.07 TOC	1/100
G-8026				Height of Riser (above	land surface)	2.64	1/100
Weil ID #SW102	· · · · · · · · · · · · · · · · · · ·	 		Land Surface Elevation	·	617.43	1/100
Upgradient <u>X</u> Dow			1 1	Screened Interval	·	33.58-48.58	1/100
Weather ConditionsSunny,	, Hot, Humid			Dedicated Pump or Bal	ier YESNO _	Х туре	
Air Temperature35		<u></u>	<u>•c</u>	Steel Guard Pipe Arous	nd Casing YES X	_NO	
Total Well Depth (TWD) =		51.22 TOC	1/100 ft	Locking Cap YES			
Depth to Ground Water (DGW) = _		39.88 TOC	1/100 ft	Protective Post/Abutme	ent YESNO	<u>x</u>	
ength of Water Column (LWC) =	TWD - DGW =	11.34	1/100 ft	Well Integrity Satisfact	ory YES X NO		
Casing Volume (OCV) = LWC x	0.163 =	1.85	gal	Well Yield LOW _X	MODERATEH	 GH	
Casing Volumes = 9.	24 gal	= Standard Evacuation	on Volume	Remarks			
lethod of Well Evacuation	Te:	ion Bailer					
lethod of Sample Collection	Tet	fion Baller					
Total Volume of Water Removed		9,5	gal				
		·	FIELD AN	ALYSES			
/OLUME PURGED (gallons)	1.0	2.0	4.0	6.0	8.0	9.2	
TIME (military)	14.12	14.18	14.28	14.35	14.42	14.51	
oH (S.U.)	6.57	6.65	6.70	6.79	6.80	6.81	
Eh (mV)	••				••		
Sp. Cond. (μmhos/cm)	-70*	-70*	-70*	-60*	-60*	-60*	
Water Temp. (°C)	19.0	18.0	18.0	18.0	18.0	18.0	
TURBIDITY (subjective) *	4	4	3	3	3	2 to 3	
(1) Clear (2) Slight (3) Moderate	(4) High						



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Date (yr/mo/day)	90/9/26			Casing Diameter		2.0	inche
Field Personnel D. Detv	viler, S. Asquith			Casing Material	Sch. 40	PVC and Stainless Ste	el Screen
Site Name Medley	Farms RI/FS - P	hase II		Measuring Point Elevatio		620.07 TOC	1/100
SEC Job # G-8026	i	· -		Height of Riser (above la		2.64	1/100
Well ID #SW102				Land Surface Elevation	· · · · · · · · · · · · · · · · · · ·		1/100
Upgradient_X_Dow	ngradient			Screened Interval		33.58-48.58	1/100
Weather Conditions	Clear			Dedicated Pump or Baile		X Type	
Air Temperature	27		<u>•c</u>	Steel Guard Pipe Around	Casing YES X	NO	
Total Well Depth (TWD) =		51.12 TOC	1/100 ft	Locking Cap YES X	NO		
Depth to Ground Water (DGW) = _		40.05 TOC	1/100 ft	Protective Post/Abutmen	t YESNO _	<u>x</u>	
Length of Water Column (LWC) = 1	TWD - DGW =	11.07	1/100 ft	Well Integrity Satisfactor	y YES X NO		
1 Casing Volume (OCV) = LWC x	.163 =	1.80	gai	Well Yield LOW	MODERATE X HI	GH	
5 Casing Volumes = 9.02	2 gal =	Standard Evacuati	on Volume	Remarks			
Method of Well Evacuation	Teflon E	laller					
Method of Sample Collection	Teflon E	lailer					
Total Volume of Water Removed	10		gal				
1			FIELD	ANALYSES			
VOLUME PURGED (gallons)	2	4	6	8	10		
TIME (military)	15:55	16:00	16:05	16:11	16:15		· · · · · · · · · · · · · · · · · · ·
pH (8.U.)	6.43	6.55	6.50	6.53	6.58		
Eh (mV)				••	••		
Sp. Cond. (µmhos/cm)	161	163	160	167	164		
Water Temp. (℃)	13.0	13.5	13.0	13.0	13.0		
TURBIDITY (subjective) *	4	4	3	4	4	L	
1/1\ Mans /2\ Olimbi /2\ \$fadamia	/4\ Ulah						
*(1) Clear (2) Slight (3) Moderate				: >100; 4th turbidity: 5; 5	 		



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Date (yr/mo/day) 90/08/29				Casing Diameter		2.0	inches
Field Personnel S. Asqui				Casing Material	Sch. 40 P	VC and Stainless Stee	el Screen
One Hallie	arms RI/FS - Ph	ase ii		Measuring Point Elevation	n	635.68 TOC	1/100 f
SEC Job # G-8026				Height of Riser (above lar			1/100 f
Well ID # SW103	·			Land Surface Elevation		633.40	1/100 f
Upgradient_X_De			Ì	Screened Interval		29.72-45.00	1/100 f
Weather Conditions Sunn	y, Hot, Humid			Dedicated Pump or Bailer	YESN	O <u>X T</u> ype	
Air Temperature35			<u>°C</u>	Steel Guard Pipe Around	Casing YES	<u>X_</u> NO	
Total Well Depth (TWD) =	_ 	47.28 TOC	1/100 ft	Locking Cap YES X	NO		
Depth to Ground Water (DGW) =		36.82 TOC	1/100 ft	Protective Post/Abutmen	YESN	э <u>х</u>	
Length of Water Column (LWC)	= TWD - DGW = _	10.46	1/100 ft	Well Integrity Satisfactory	YES X N	o <u> </u>	
1 Casing Volume (OCV) ≈ LWC	x <u>0.163 </u>	1.70	gal	Well Yield LOW X	ODERATE	_нен	
5 Casing Volumes =	8.52 g	al = Standard Evacuation	on Volume	Remarks			
Method of Well Evacuation		efion Bailer					
Method of Sample Collection		efion Baller					
Total Volume of Water Removed	l	8.6	gal				
			FIELD A	NALYSES		-	·····
VOLUME PURGED (gallons)	1.0	2.0	4.0	6.0	8.6		
TIME (military)	1132	1141	1152	12.02	1210		
pH (S.U.)	5.94	5.93	5.90	5.90	6.12		
Eh (mV)		••					
Sp. Cond. (μmhos/cm)	90*	10*	-20*	-20*	-10*		
Water Temp. (°C)	18.0	17.0	17.0	16.5	17.0		
TURBIDITY (subjective) *	44	4	3_	3	2		<u> </u>
* (1) Clear (2) Slight (3) Modera	te (4) High						
MMENTS/OBSERVATIONS:	* Specific cond	luctivity meter was i	malfunctioning	g; relied on pH, temperat	ure, and turble	dity.	



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Date (yr/mo/day)	90/9/27			Casing Diameter		2.0	inches
Field Personnel G. Ove	erby/S. Asquith			Casing Material		PVC and Stainless St	eel Screen
Site Name Medle	y Farms RI/FS - I	Phase II	}	Measuring Point Elev	ation	635.68 TOC	1/100 f
SEC Job # G-802	6				e land surface)		1/100 f
Well ID #SW103	3		1 1		on		1/100 f
UpgradientXDov	vngradlent		1 1				1/100 f
Weather Conditions	Sunny			Dedicated Pump or B	ailer YESNO	X _{Type}	
Air Temperature	27		°c :	Steel Guard Pipe Aro	und Casing YES X	NO	
Total Well Depth (TWD) =		47,43 TOC	1/100 ft	ocking Cap YES	X NO		
Depth to Ground Water (DGW) =	<u></u>	37.45 TPC	1/100 ft	Protective Post/Abut	ment YESNO	X	
Length of Water Column (LWC) =	TWD - DGW =	9.98	<u>1/100 ft</u>	Well Integrity Satisfac	ctory YES X NO		
1 Casing Volume (OCV) = LWC x	0.163 =	1.63	gat	Well Yield LOW	MODERATEH	GH	
5 Casing Volumes = 8.2	gal	= Standard Evacuation					
Method of Well Evacuation	Teflon	Bailer			<u> </u>		
Method of Sample Collection	Teflon	Bailer		· · · · · · · · · · · · · · · · · · ·			
Total Volume of Water Removed			gal				
			FIELD ANA	LYSES			
VOLUME PURGED (gallons)	2	4	6	8	Sample	1	
TIME (military)	13:15	13:20	13:25	13:30	Taken 1330		
pH (S.U.)	5.9	6.0	6.1	6.0			
Eh (mV)							
Sp. Cond. (μmhos/cm)	80	80	80	80			
Water Temp. (°C)	13	13	13	13			
TURBIDITY (subjective) *	4	4	3			<u> </u>	J
* (1) Clear (2) Slight (3) Moderate	(4) High						
OMMENTS/OBSERVATIONS:		A 11714 A 17 4	400 MTU 0	1.T. 1. 400 N			



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P.O. Box 24000 Greenville, SC 29616

Date (yr/mo/day)	90/08/29		Casin	g D
Field Personnel			Casin	g M
Site Name		Phase II	[[-
SEC Job #			Heigh	
Well ID #			Land	
Upgrad	ient <u>X</u> Downgradient		Scree	ned
Weather Conditions	Sunny, Hot, Humid		Dedic	ate
Air Temperature _	35		<u>°C</u> Steel	Gua
Total Well Depth (T	WD) =	37.39 TOC	1/100 ft Locki	ng (
	ater (DGW) =			ctiv
	lumn (LWC) = TWD - DGW =			nteg
Casing Volume (C	CV) = LWC x 0.163 =_	2.28	gal Well \	(lelc
Casing Volumes	11.39	gal = Standard Evacuati	on Volume Rema	rk s
dethod of Well Eva	cuation	Teflon Bailer		
Method of Sample (Collection	Teflon Baller		
otal Volume of Wa	ter Removed	11.0	gal	

Casing Diameter	2.0	inches
Casing Material Sch. 4	0 PVC and Stainless Steel Screen	
Measuring Point Elevation	649.85 TOC	1/100 ft
Height of Riser (above land surface)		1/100 ft
Land Surface Elevation	647.46	1/100 ft
Screened Interval	19.80-35.00	1/100 ft
Dedicated Pump or Bailer YES		
Steel Guard Pipe Around Casing Y	ES <u>X N</u> O	
Locking Cap YES X NO		
Protective Post/Abutment YES	_NO <u>X</u> _	
Well Integrity Satisfactory YES	<u> </u>	
Well Yield LOW X MODERATE	нсн	
Remarks		

FIELD ANALYSES							
VOLUME PURGED (gallons)	1.0	2.0	4.0	6.0	8.0	10.6	
TIME (military)	1553	1559	1604	1609	1615	1622	
pH (S.U.)	6.21	6.40	6.68	6.72	6.81	6.43	
Eh (mV)			••				
Sp. Cond. (µmhos/cm)	-70*	-70*	-70*	-60*	-60*	-50*	
Water Temp. (°C)	18.0	16.5	15.5	16.0	16.0	16.0	
TURBIDITY (subjective) *	4	4	3	3	2	2	

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: * Specific conductivity meter was malfunctioning: relied on pH, temperature, and turbidity.



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Date (yr/mo/day):	90/9/27			Casing Diameter		2.0	Inches
Field Personnel G. Ove	erby/S. Asquith			Casing Material	Sch. 4	0 PVC and Stainless St	eel Screen
Site NameMedie	y Farms RI/FS - F	hase II	}	Measuring Point Elevation	on	649.85 TOC	1/100 f
SEC Job # G-802	<u> </u>			Height of Riser (above is			1/100 f
Well ID #SW104	4			Land Surface Elevation			1/100 f
UpgradientX_Dov				Screened interval			1/100 f
Weather Conditions	Sunny			Dedicated Pump or Baile	r YESNO	<u>Х</u> уре	
Air Temperature	21		<u>°C</u>	Steel Guard Pipe Around	Casing YES	<u>X NO</u>	
Total Well Depth:(TWD) =	- · · · · · · · · · · · · · · · · · · ·	36.49 TOC	1/100 ft	Locking Cap YES X	NO		
Depth to Ground Water (DGW) =	<u> </u>	24.04 TOC	1/100 ft	Protective Post/Abutmer	t YESNO	X	
Length of Water Column (LWC) =	TWD - DGW =	12.45	1/100 ft	Well integrity Satisfactor	Y YES X NO		
1 Casing Volume (OCV) = LWC x	0.163 =	2.03	gal	Well Yield LOW X	MODERATE		
5 Casing Volumes = 10	.15 gal :	Standard Evacuati	on Volume	Remarks			
Method of Well Evacuation	Teflon I	Bailer					
Method of Sample Collection	Teflon I	Bailer					
Total Volume of Water Removed	10.	5	gal				
			FIELD AI	NALYSES			
VOLUME PURGED (gallons)	2	4	6	8	10	Sample	
TIME (military)	10:25	10:30	10:35	10:40	10:45	Taken - 1045	
pH (S.U.)	5.8	6.2	6	5.9	6	1	
Eh (mV)	**						
Sp. Cond. (μmhos/cm)	350	150	150	145	145		
Water Temp. (°C)	13	12	12	12	12		
· ' ' L	2	3	3	3	3		



inches

1/100 ft 1/100 ft 1/100 ft 1/100 ft

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Date (yr/mo/day)90/09/19			Casing Diameter	2.0
Fleid Personnel J. Gillespie			Casing Material	Sch. 40 PVC and Stainless Steel Screen
Site Name Medley Farms RI/FS - Ph	ase II		Measuring Point Elevation	
SEC Job # G-8026		<u> </u>	Height of Riser (above land a	
Well ID #SW106			Land Surface Elevation	
Upgradient <u>X</u> _Downgradient			Screened Interval	
Weather Conditions Partly Cloudy & Wan	m		Dedicated Pump or Baller	YES NO X Type
Air Temperature 27		<u>℃</u>	Steel Guard Pipe Around Ca	sing YES X NO
Total Well Depth (TWD) =	24.21 TOC	1/100 ft	Locking Cap YES X NO	·
Depth to Ground Water (DGW) =	11.33 TOC	1/100 ft	Protective Post/Abutment	YESNO X_
Length of Water Column (LWC) = TWD - DGW = _	12.88	1/100 ft	Well Integrity Satisfactory	YES X NO
1 Casing Volume (OCV) = LWC x 0.163 =	2.10	gal	Well Yield LOW X MO	DERATE HIGH
5 Casing Volumes ≈ 10.50 g	al = Standard Evacuat	ion Volume	Remarks	
Method of Well Evacuation	efion Bailer		·	
Method of Sample Collection	Tefion Bailer			
Total Volume of Water Removed	13.5	gal		

			FIELD ANAL	YSES			
VOLUME PURGED (gallons)	2.0	4.0	6.0	8.0	10.0	12.0	13.5
TIME (military)	1529	1535	1540	1546	1552	1601	1606
рH (S.U.)	6.5	6.70	6.54	6.59	6.62	6.62	6.67
Eh (mV)							
Sp. Cond. (µmhos/cm)	105.4	94.8	104	106.7	103.1	99.9	95.7
Water Temp. (°C)	14.0	14.0	14.0	14.0	14.0	13.5	13.5
TURBIDITY (subjective) *	3	3	3	3	_ 2	2	2

(1) 01001 (2) 0118111 (0) 111000	· · · · · · · · · · · · · · · · · · ·	
COMMENTS/OBSERVATIONS:	Sampled at 1613. Sample Identification is SW106-1.	



Page	1	ot	1
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Date (yr/mo/day)	90/9/27	 		Casing Diameter		2.0	Inches	
	rby/S. Asquith			Casing Material Sch. 40 PVC and Stainless Steel Screen				
Site Name Medie	y Farms RI/FS - F	hase II		Measuring Point Elevation	on	596.12 TOC	1/100 f	
SEC Job # G-8020	5			Height of Riser (above la	nd surface)	3.21	1/100 f	
Well ID #SW106	3			Land Surface Elevation			1/100 f	
Upgradient_X_Dov	vngradient		}	Screened Interval		_	1/100 f	
Weather Conditions	Clear, Mild			Dedicated Pump or Baile	r YESNO	X Type		
Air Temperature	24		<u>°C</u>	Steel Guard Pipe Around	Casing YES	(NO		
Total Well Depth (TWD) =		24.45 TOC	1/100 ft	Locking Cap YES X	NO			
Depth to Ground Water (DGW) = _		11.44 TPC	1/100 ft	Protective Post/Abutmer		<u> </u>		
Length of Water Column (LWC) =	TWD - DGW =	13.0	1/100 ft	Well Integrity Satisfactor	YES X NO			
1 Casing Volume (OCV) = LWC x	0.163 =	2.1	gal	Well Yield LOW X	MODERATE			
5 Casing Volumes = 10.	.6 gal :	Standard Evacuation	on Volume	Remarks				
Method of Well Evacuation	Teflon	Bailer						
Method of Sample Collection	Teflon	Bailer						
Total Volume of Water Removed	10		gal					
			FIELD A	NALYSES				
VOLUME PURGED (gallons)	2	4	6	8	10	Sample		
TIME (military)	15:40	15:45	15:50	15:55	16:00	Taken 16:00		
pH (S.U.)	6.2	6.3	6.3	6.3	6.3			
Eh (mV)	**							
Sp. Cond. (μmhos/cm)	98	100	100	101	100			
Water Temp. (°C)	14	13	13	13	13			
TURBIDITY (subjective) *	4	1		1		_L		
* (1) Clear (2) Slight (3) Moderate	(4) High							
OMMENTS/OBSERVATIONS:	2 gal. Turb = > 10	00 NTU: 4 gal. Tu	rb = > 41 NTU:	6 gal. Turb = 22 NTU: 1	0 gal. Turb = 13	NTU		



Page	1	of	1	

Date (yr/mo/day)	90/9/25			Casing Diameter	2.0	inche
	twiler, S. Asquith			Casing Material Sci	n. 40 PVC and Stainless Steel	Screen
Site Name Medic	ey Farms RI/FS - P	hase II		Measuring Point Elevation		1/100
SEC Job # G-802	26			Height of Riser (above land surface)		1/100
Well ID #SW10)8			Land Surface Elevation		1/100
Upgradient_X_Do	wngradient			Screened Interval		1/100
Weather Conditions	Clear		i	Dedicated Pump or Bailer YES	NO X Type	
Air Temperature	20		°C	Steel Guard Pipe Around Casing YE	s <u>X no</u>	
Total Well Depth (TWD) =	 	22.49 TOC	1/100 ft	Locking Cap YES X NO		
Depth to Ground Water (DGW) =		7.73 TPC	1/100 ft	Protective Post/Abutment YES	NO _X	
Length of Water Column (LWC) :	= TWD - DGW =	14.76	1/100 ft	Well Integrity Satisfactory YES X	NO	
1 Casing Volume (OCV) ≈ LWC	× <u>0.163</u> =	2.41	gal	Well Yield LOW X MODERATE	HIGH	
5 Casing Volumes = 1	2.05 gai =	Standard Evacuation	n Volume	Remarks		
Method of Well Evacuation	Teflon E	Bailer				
Method of Sample Collection						
Total Volume of Water Removed	2.5		gal			
			FIELD	ANALYSES		
VOLUME PURGED (galions)	2.5		T			
TIME (military)	15:50					
рH (S.U.)	6.29			!		
Eh (mV)						
Sp. Cond. (μmhos/cm)	95		<u> </u>			 -
Water Temp. (°C)	13.0					
TURBIDITY (subjective) *	4		<u> </u>			
* (1) Clear (2) Slight (3) Moderat	e (4) High					
MATERIA POPER VATIONE.	1et turbidity >100): Well balled dry	at 2.5 gallon	s; sampled after sufficient amount ha	d recovered	



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Date (yr/mo/day)	90/10/2			Casing Diameter	2.0	Inches
Field Personnel D. De	old Personnel D. Detwiler, S. Asquith				Sch. 40 PVC and Stainless	Steel Screen
Site Name Medic	ey Farms RI/FS -	Phase II		Measuring Point Elevation		1/100 ft
SEC Job # G-802	26			Height of Riser (above land su	rface) 2.61	1/100 ft
Well ID #SW10)9			Land Surface Elevation	658.65	1/100 ft
X_UpgradientDo				Screened Interval	44.80-60.00	1/100 ft
Weather Conditions	Clear			Dedicated Pump or Bailer Y		
Air Temperature	27		<u>್</u>	Steel Guard Pipe Around Casi	ng YES X NO	
Total Well Depth (TWD) =		63.00 TOC	1/100 ft	Locking Cap YES X NO		
Depth to Ground Water (DGW) =		52.71 TPC	1/100 ft	Protective Post/Abutment Y	esno _X_	
Length of Water Column (LWC) :	= TWD - DGW =	10.29	1/100 ft	Well Integrity Satisfactory	ES X NO	
1 Casing Volume (OCV) = LWC	×653 =	1.68	gal	Well Yield LOWMODE	RATEHIGH _X_	
5 Casing Volumes = 8.	.39 gal	= Standard Evacuati	ion Volume	Remarks		
Method of Well Evacuation	ISCO	Pump				
Method of Sample Collection	ISCO	Pump				
Total Volume of Water Removed	8.	<u>5</u>	gal			
	· <u>- </u>		FIELD	ANALYSES		
VOLUME PURGED (gallons)	1.7	3.5	5.1	7.0	8.5	
TIME (military)	10:25	10:30	10:35	10:40	10:45	
рН (S.U.)	9.41	7.63	6.48	6.17	6.13	
Eh (mV)	•-				••	
Sp. Cond. (μmhos/cm)	442	208	144	150	145	
Water Temp. (°C)	15	14	14	14		
TURBIDITY (subjective) *	4	4	3	4	4	
* (1) Clear (2) Slight (3) Moderat	te (4) High		•			
OMMENTS/OBSERVATIONS:		gal. • >100, 3.5 ga	ls: >100, 5.1	nal - >100, 7.0 gal >100, 8.5 g	al >100	

Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Page 1 of 1 Date (yr/ino/day): 90/1/10 Field Personnel <u>DETWILER/OVERBY</u> Site Name _____ MEDLEY FARMS RI/FS - PHASE IB SEC Job # ______ G-8026 Well ID # BW-1 X Upgradient Downgradient CLEAR Weather Conditions Air Temperature ______55° F Total Well Depth: (TWD) = 96.5 1/100 ft Depth to Ground Water (DGW) = 50.38 1/100 ft Length of Water Column (LWC) = TWD - DGW = 46.12 1/100 ft 1 Casing Volume (OCV) = LWC x 0.653 = 30.12 5 Casing Volumes = 150.60 gal = Standard Evacuation Volume Method of Well Evacuation ISCO WELL PUMP Method of Sample Collection Teflon Bailer

150

Casing Diameter	4.0	Inches
Casing Material Sch. 4		
Measuring Point Elevation		1/100 ft
Height of Riser (above land surface)	1.25	1/100 ft
Land Surface Elevation		1/100 ft
Screened Interval OPEN CORE HO		1/100 ft
Dedicated Pump or Bailer YESNO	X Type	
Steel Guard Pipe Around Casing YES X	NO	
Locking Cap YES X NO		
Protective Post/Abutment YESNO	<u>x</u>	
Well Integrity Satisfactory YES X NO		
Well Yield LOWMODERATEHI	GH <u>X</u>	
Remarks		·

FIELD ANALYSES								
VOLUME PURGED (gallons)	30	60	90	120	150			
TIME (military)	14:50	15:10	16:02	16:31	17:13			
рН (S.U.)	7.2	7.2	7.8	7.2	7.2			
Eh	•	-	-		-			
Sp. Cond. (μmhos/cm)	150	125	240	243	430			
Water Temp. (°C)	15	15	15	15	15			
TURBIDITY (subjective) *	3	2	1	1	1			

gal

*(1) Clear (2) Slight (3) Mode	rate (4) High		_	
·				
OMMENTS/OBSERVATIONS:				
Chimeia Coocii a a ilono.				

Total Volume of Water Removed



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P.O. Box 24000 Greenville, SC 29616

					· · · · · · · · · · · · · · · · · · ·	
Date (yr/mo/day)	90/9/28			Casing Diameter	4.0	Inches
Field Personnel	G. Overby/S. Asqu	ith		Casing Material	Sch. 40 PVC and Stainless Stee	ī
Site Name	Medley Farms RI/F	S - Phase II		Measuring Point Elevation	***	1/100 ft
SEC Job#	G-8026			Height of Riser (above land surface)		1/100 ft
Well ID #	BW1	<u></u>		Land Surface Elevation		1/100 ft
XUpgradient_	Downgradient			Screened Interval	85.60-94.80	1/100 ft
Weather Conditions	Partly Clo	oudy		Dedicated Pump or Bailer YES		
Air Temperature		<u> </u>	<u>°c</u>	Steel Guard Pipe Around Casing	YES X NO	
Total Well Depth (TWD)		94.80 TOC	1/100 ft	Locking Cap YES X NO		
Depth to Ground Water	(DGW) =	49.36 TOC	1/100 ft	Protective Post/Abutment YES _	NO _X_	
Length of Water Column	(LWC) = TWD - DGW =	45.44	1/100 ft	Well Integrity Satisfactory YES _	X NO	
1 Casing Volume (OCV)	= LWC x <u>0.652</u> =_	29.6	gal	Well Yield LOWMODERATE	<u> X н</u> ідн	
5 Casing Volumes =	148.2	gal = Standard Evacuat	on Volume	Remarks * Recalibrate Instr	uments.	
Method of Well Evacuati	on	Isco Mod. 2600		<u> </u>		
Method of Sample Colle	ction	Isco Mod. 2600				
Total Volume of Water R	lemoved	150	gal			

			FIELD ANAL	YSES			
VOLUME PURGED (gallons)	30	50	60	70	80	95	100
TIME (military)	14:15	15:20	15:30	15:40	16:05	16:27	16:40
pH (S.U.)	6.86	*9.2	9.2	8.2	7.1	6.94	7.0
Eh (mV)						-	
Sp. Cond. (µmhos/cm)	117	157	154	136	139	109	110
Water Temp. (°C)	15.0	14	14	14	14	14	14
TURBIDITY (subjective) *	1	1	1	1	1	1	

*(1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: 1 st Turb: 18, 50 gal Turb: 26 NTU, 60 gal. Turb: 22 NTU, 80 gal Turb: 15 NTU, 95 gal Turb: 10, 110 gal Turb: = 15 NTU



Page	2	of	2
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Date (yr/mo/day)	90/9/28	<u></u> -		C	asing Diameter		4.0	inches
Field Personnel G. Ov	erby/S. Asquith				esing Material		PVC and Stainless	Steel Riser
Site Name Medle	y Farms RI/FS -	Phase II		M	easuring Point Elevation		689.90 TOC	1/100 f
SEC Job # G-802	6				eight of Riser (above land			1/100 f
Well ID #BW1					and Surface Elevation			1/100 f
X Upgradient Do	wngradient				creened interval		85.60-94.80	1/100 f
Westher Conditions	Dorthy Claud	у			edicated Pump or Bailer		Type	
Air Temperature			°C		eel Guard Pipe Around Ca			
Total Well Depth (TWD) =		94.80 TOC	1/100 ft	1 1	ocking Cap YES X N	_		
Depth to Ground Water (DGW) =			1/100 ft	1 1	rotective Post/Abutment		x	
Length of Water Column (LWC) =			1/100 ft		ell integrity Satisfactory			
1 Casing Volume (OCV) = LWC x			gal	1 1	eli Yield LOWMO			
5 Casing Volumes = 14					emarks * Recalibra		" 	
Method of Well Evacuation			OII VOIGIII	"	Billarksitecunora	to matrumonts		
Method of Sample Collection		co Mod. 2600		-	·			
Total Volume of Water Removed		150		-		 -		
Total volume of water velloved			gal					
	······································		FIELD	ANAL	YSES			
VOLUME PURGED (gallons)	110	T	T					
TIME (military)	16:50	1						
pH (S.U.)	7.0							
Eh (mV)								
Sp. Cond. (μmhos/cm)	110							
Water Temp. (°C)	14							
TURBIDITY (subjective) *	1	<u> </u>			1			
* (1) Clear (2) Slight (3) Moderate	e (4) High							
OMMENTS/OBSERVATIONS:		O mal Trush of NTU	60 mal Turk	22 N	ITIL 00 gal Turb. 15 NT	II OF mal Turbs	10 110 gal Turb	15 NTH

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Date (yr/mo/day)	89/8/9		
Field Personnel	DETWILER/GI	ILLESPIE	
Site Name	MEDLEY FAR	MS RI/FS PHASE IA	
SEC Job #	G-8026		
Well ID #	BW-2	· · · · · · · · · · · · · · · · · · ·	
Upgradien	XDowngradier	at	
Weather Conditions	CLE	AR	
Air Temperature	65°	<u>F</u>	℃
Total Well Depth (TWD) =85.0		1/100 ft
Depth to Ground Water	(DGW) =66.7	5	1/100 ft
Length of Water Colum	n (LWC) ≈ TWD - DC	GW =18.25	1/100 ft
1 Casing Volume (OCV) = LWC x 0.6528	= 11.91	gal
5 Casing Volumes =	59.57	gal = Standard Eva	cuation Volume
Method of Well Evacua	tion ISC	O WELL PUMP	
Method of Sample Coll	ection Teff	on Bailer	
Total Volume of Water	Removed 60		gal

Casing Diameter	4.0	inches
Casing Material Sch. 40	PVC & Stainless Steel	<u>-</u>
Measuring Point Elevation	662.99	1/100 ft
Height of Riser (above land surface)	1.92	1/100 ft
Land Surface Elevation		1/100 ft
Screened Interval OPEN CORE HO	LE (64.4 TO 85.0)	1/100 ft
Dedicated Pump or Bailer YESNO _	Х Туре	
Steel Guard Pipe Around Casing YES X	NO	
Locking Cap YES X NO	-	
Protective Post/Abutment YESNO _		
Well Integrity Satisfactory YES X NO		
Well Yield LOWMODERATE _X HIG	зн	
Remarks		

FIELD ANALYSES VOLUME PURGED (gallons) 24 48 12 36 60 TIME (military) 11:03 11:15 11:26 11:53 12:16 pH (S.U.) 6.26 6.72 6.51 6.22 6.19 Eh Sp. Cond. (µmhos/cm) 77 72 73 71 Water Temp. (°C) 17.7 17.7 17.4 18 17.8 TURBIDITY (subjective) *

*(1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS:

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Date (yr/mo/day) 90/1	1/10		Casing Diameter	4.0	Inches
Field PersonnelDE	TWILER/OVERBY		Casing MaterialS	ch. 40 PVC & Stainless Steel	
Site Name ME	DLEY FARMS RI/FS - PH/	ASE IB	Measuring Point Elevation	662.99	1/100 f
SEC Job # G-8	026		Height of Riser (above land surface)		1/100 f
Well ID #BW	J-2		Land Surface Elevation	661.26	1/100 f
Upgradient_X_Do	wngradient		Screened Interval OPEN COF	RE HOLE (64.36 - 85.0)	1/100 f
Weather Conditions	CLEAR		Dedicated Pump or Bailer YES	NO X Type	
Air Temperature	55° F	° C	Steel Guard Pipe Around Casing YES		
Total Well Depth (TWD) =		1/100 ft	Locking Cap YES X NO		
Depth to Ground Water (DGW) =		1/100 ft	Protective Post/Abutment YES	NO X	
Length of Water Column (LWC) :		34 1/100 tt	Well integrity Satisfactory YES X	·	
1 Casing Volume (OCV) = LWC	x 0.653 = 11.	97 gal	Well Yield LOW MODERATE		
5 Casing Volumes =			Remarks		
Method of Well Evacuation					
Method of Sample Collection	Tetion Baller				
Total Volume of Water Removed	60	gal			
		FIELD	ANALYSES		
VOLUME PURGED (gallons)	60				
TIME (military)	17:26				
pH (S.U.)	5.9				
Eh	-				
Sp. Cond. (μmhos/cm)	170				
Water Temp. (°C)	14				
TURBIDITY (subjective) *	1]
*(1) Clear (2) Slight (3) Moderat	te (4) High				



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Date (yr/mo/day) _	90/9/28			Casing Diameter	2.0	inches	
Field Personnel G. Ove	erby/S. Asquiti	<u> </u>	l	Casing Material	Sch. 40 PVC and Stainless Steel		
Site NameMedle	y Farms RI/FS	- Phase II		Measuring Point Elevation	662.99 TOC	1/100 f	
SEC Job # G-802	6			Height of Riser (above land surface		1/100 f	
Well ID #BW2	·			Land Surface Elevation		1/100 f	
Upgradient_X_Dov				Screened Interval		1/100 f	
Weather Conditions	Clear, Mild			Dedicated Pump or Bailer YES	NO X Type		
Air Temperature	24		<u>°c</u>	Steel Guard Pipe Around Casing	YES X NO		
Total Well Depth (TWD) =		85.00 TOC	1/100 ft	Locking Cap YES X NO			
Depth to Ground Water (DGW) =		66.15 TOC	1/100 ft	Protective Post/Abutment YES	NO _X_		
Length of Water Column (LWC) =	TWD - DGW = _	18.85	1/100 ft	Well integrity Satisfactory YES	X NO		
1 Casing Volume (OCV) = LWC x			gal	Well Yield LOWMODERA	re <u>High X</u>		
5 Casing Volumes =15			on Volume_	Remarks Choose to use te	flon bailer instead, of ISCO beca	use of low	
Method of Well Evacuation		Teflon Bailer		water level.			
Method of Sample Collection							
Total Volume of Water Removed		15	gal				
			FIELD	ANALYSES			
VOLUME PURGED (gallons)	3	6	9	12	15		
TIME (military)	11:15	11:20	11:43	11:51 1	2:04		
pH (S.U.)	6.2	6.16	6.24	6.28	5.29		
Eh (mV)							
Sp. Cond. (μmhos/cm)	100_	103	88	87	86		
Water Temp. (°C)	14	13	13.8	13.5	3.5		
TURBIDITY (subjective) *	2	2	11_	1 1	1	···	
(1) Clear (2) Slight (3) Moderate	(4) High						
MMENTS/ORSERVATIONS:	3 gal Turb: >10	00 NTU, 6 gal Turb:	100 NTU. 9	al. Turb: 93 NTU, 12 gal Turb: 88	NTU, 15 gal. Turb: 80.		

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Date (yr/mo/day) 90/1	/11			Casing Diameter	4.0	Inches
Field Personnel DET	WILER/OVERBY		· · · · · · · · · · · · · · · · · · ·	Casing Material	Sch. 40 PVC & Stainless Steel	
Site NameMED	LEY FARMS RI/FS	- PHASE IB		Measuring Point Elevation	574.82	1/100 f
SEC Job # G-80				Height of Riser (above land surface)	= :	1/100 f
Well ID # BW	-3			Land Surface Elevation		1/100 t
UpgradientX_Dov	wngradient			Screened Interval OPEN C	ORE HOLE (35.0 - 55.0)	1/100 f
Weather Conditions	CLEAR			Dedicated Pump or Bailer YES		
Air Temperature	60° F		<u>°C</u>	Steel Guard Pipe Around Casing		
Total Well Depth (TWD) =			1/100 ft	Locking Cap YES X NO		
Depth to Ground Water (DGW) =			1/100 ft	Protective Post/Abutment YES	NO X	
Length of Water Column (LWC) =	TWD - DGW =	48.83	1/100 ft	Well Integrity Satisfactory YES		
1 Casing Volume (OCV) = LWC x	0.653 =	31.86	gal	Well Yield LOWMODERATE		
5 Casing Volumes = 159			tion Volume	Remarks		
Method of Well Evacuation						
Method of Sample Collection						
Total Volume of Water Removed	160		gal			
	·		FIELD	ANALYSES		
VOLUME PURGED (gallons)	128	160				
TIME (military)	13:47	14:33				
pH (S.U.)	7.3	7.5			-	
Eh Sp. Cond. (μmhos/cm)			 			
Water Temp. (°C)	138 16	145				
TURBIDITY (subjective) *	1	1				
* (4) Ol (0) Oll-ba (0) PI	· (4) [#=b					
* (1) Clear (2) Slight (3) Moderate	9 (4) High					



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Page		of	•
9-		•	

Date (yr/mo/day)	90/9/28			Casing Diameter		2.0	Inches
Field Personnel D. Det	wiler			Casing Material	Sch. 40	PVC and Stainless Steel	Screen
Site Name Medle	y Farms RI/FS - I	Phase II		Measuring Point Elevati			1/100 ft
SEC Job # G-802	6			Height of Riser (above I			1/100 ft
Well ID # BW3				Land Surface Elevation			1/100 ft
Upgradient_X_Dov			11	Screened Interval			1/100 ft
Weather Conditions	Overcast			Dedicated Pump or Ball			
Air Temperature:	21		<u> </u>	Steel Guard Pipe Aroun	d Casing YES X	NO	
Total Well Depth (TWD) =		55.00 TOC	1/100 ft	Locking Cap YES			
Depth to Ground Water (DGW) =			1/100 ft	Protective Post/Abutme		X _	
Length of Water Column (LWC) =			1/100 ft	Well integrity Satisfacto			
1 Casing Volume (OCV) = LWC x			gal	Well Yield LOW			
5 Casing Volumes = 15		= Standard Evacuation	on Volume	Remarks			
Method of Well Evacuation	··	sco Pump					
Method of Sample Collection	l	sco Pump					
Total Volume of Water Removed		157	gal				
			FIELD AN	ALYSES			
VOLUME PURGED (gallons)	31	62	93	124	156.33		
TIME (military)	12:42	13:40	15:25	16:00	16:50		
pH (S.U.)	6.20	6.33	6.43	6.42	6.47		
Eh (mV)							
Sp. Cond. (μmhos/cm)	290	223	150	145	144		
Water Temp. (°C)	13.0	13.0	12.8	13.0	13.0		
TURBIDITY (subjective) *	1	1	11	1	<u> </u>		
* (1) Clear (2) Slight (3) Moderate	(4) High						
				o: 16 NTU, 4th Turb: 1		- 11=1	

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Date (yr/mo/day) 89/8	/8			Casing Diameter		4.0	Inche
Field Personnel HUI	IT/DETWILER		<u> </u>	Casing Material		Stainless Steel	
Site NameME	DLEY FARMS RI/FS	PHASE IA		Measuring Point Elevati		564.32	1/100
SEC Job # G-8	026			Height of Riser (above I			1/100
Well ID #BW	-4			Land Surface Elevation			1/100
Upgradient_XDo	wngradient			Screened Interval			1/100
Weather Conditions	OVERCAST,	SLIGHT BREEZE		Dedicated Pump or Ball	r YESNO	X Type	
Air Temperature	75° F		<u>°C</u>	Steel Guard Pipe Aroun			
Total Well Depth (TWD) =	31.0		1/100 ft	Locking Cap YES			
Depth to Ground Water (DGW) =			1/100 ft	Protective Post/Abutme			
Length of Water Column (LWC) :		27.11	1/100 ft	Well Integrity Satisfacto			
1 Casing Volume (OCV) = LWC			gal	Well Yield LOW			
5 Casing Volumes = 88			on Volume	Remarks			
Method of Well Evacuation							
Method of Sample Collection					···		
Total Volume of Water Removed			gal				
		T		ANALYSES		·- 	
VOLUME PURGED (gallons)	18	18	18	18	18		
TIME (military)	08:45	08:57	09:10	09:27	09:40		
pH (S.U.)	6.44	7.03	7.10	7.22	7.19		
Eh	-	-		<u> </u>	-		
Sp. Cond. (μmhos/cm)	267	117	118	239	242		
Water Temp. (°C)	15.0	14.7	14.7	14.9	14.9		
TURBIDITY (subjective) *	2	2	2	2	2	<u></u>	
* (1) Clear (2) Slight (3) Moderat	e (4) High						

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Date (yr/mo/day) 90/1	/9		_ c	asing Diameter	4.0	inche
Field PersonnelDET	WILER/OVERBY		_ c:	sing Material	Sch. 40 PVC & Stainle	ss Steel
Site NameMED	DLEY FARMS RI/FS	- PHASE IB	_ M	easuring Point Elevation	564.32	1/100
SEC Job # G-86	026		_ Не	eight of Riser (above land surfa	ce)1.67	1/100
Well ID # BW	-4		_	nd Surface Elevation	562.65	1/100
UpgradientX_Do	wngradient		So	reened IntervalOPE	N CORE HOLE (18.0 - 31.0)	1/100
Weather Conditions	CLEAR/MILD		De	dicated Pump or Bailer YES	NO <u>X T</u> ype	
Air Temperature	58° F	٥,	<u>.</u> St	eel Guard Pipe Around Casing	YES X NO	
Total Well Depth (TWD) =	31	1/100 (t Lo	cking Cap YES X NO		
Depth to Ground Water (DGW) =	4.86	1/100 1	L Pr	otective Post/Abutment YES	NO_X	
Length of Water Column (LWC) =	: TWD - DGW =	26.14 1/100 1	<u>.</u> w	ell Integrity Satisfactory YES	<u> </u>	
1 Casing Volume (OCV) = LWC >	0.653 =	17.06 ga		ell Yield LOWMODERA	_	
5 Casing Volumes = 85.	3 gal	= Standard Evacuation Volume	Re	marks		
Method of Well Evacuation	Teflon Baller		_			
Method of Sample Collection	Teflon Bailer					
Total Volume of Water Removed	86	ga		-		
	<u></u>	FIE	LD ANAL	YSES	· · · · · · · · · · · · · · · · · · ·	
VOLUME PURGED (gallons)	86					
TIME (military)	14:15					
pH (S.U.)	6.16					
Eh	•		_			
Sp. Cond. (μmhos/cm)	117					
Water Temp. (°C)	14					
TURBIDITY (subjective) *	2					
* (1) Clear (2) Slight (3) Moderate	e (4) High					
OMMENTS/OBSERVATIONS:						

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Date (yr/mo/day)	90/9/26			Casing Diameter		4.0	inche
Field Personnel D. Det	wiler, S. Asquith		1 1	Casing Material Stainless Steel			
Site NameMedle	y Farms RI/FS - I	Phase II]]	Measuring Point Elevat	on	564.32 TOC	1/100 1
SEC Job # G-8020	5	. <u></u>	1 1	Height of Riser (above I		1.8	1/100 1
Well ID #BW4			1 1	Land Surface Elevation			1/100 1
UpgradientX_Dov				Screened interval		18.0-31.0	1/100 1
Weather Conditions	Clear]]	Dedicated Pump or Bail	er YES NO	К _{Туре}	
Air Temperature	25		<u>°c</u>	Steel Guard Pipe Aroun	d Casing YES X	NO	
Total Well Depth (TWD) =	·	31.0 TOC	1 1	Locking Cap YES			
Depth to Ground Water (DGW) =		5.81 TOC	1/100 ft	Protective Post/Abutme	nt YESNO	X	
Length of Water Column (LWC) =	TWD - DGW =	25.19	1/100 ft	Well integrity Satisfacto	ry YES X NO		
1 Casing Volume (OCV) = LWC x				Well Yield LOW			
5 Casing Volumes =82				Remarks			
Method of Well Evacuation	Teflon	Baller					
Method of Sample Collection	Teflon	Bailer					
Total Volume of Water Removed	8:	3	gal				
			FIELD ANA	ALYSES			
VOLUME PURGED (gallons)	16.5	33	50	66	83		
TIME (military)	10:05	10:15	10:27	10:36	10:46		· _ · · _ ·
рH (S.U.)	6.97	7.06	7.07	6.99	7.05		
Eh (mV)							
Sp. Cond. (µmhos/cm)	258	255	248	251	250		
Water Temp. (°C)	12.0	12.0	12.0	12.0	12.0		
TURBIDITY (subjective) *	1	<u> </u>	11		<u> </u>	L L	
* (1) Clear (2) Slight (3) Moderate	(4) High						
OMMENTS/OBSERVATIONS:		2nd turbidity: 36	2rd turbiditur 25	. Ath turbidity, 25, 5t	h turbiditur 21	***************************************	



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Field Personnel D. Detwiler Site Name Medley Farms RI/FS SEC Job # G-8026 Well ID # BW105	110.0 TOC 56.00 TOC	°C 1/100 ft 1/100 ft	Measuring Point Elevation Height of Riser (above lan Land Surface Elevation _ Screened Interval Dedicated Pump or Baller Steel Guard Pipe Around Locking Cap YES X	Sch. 40 PVC, n nd surface) YESNO Casing YES	2.18 669.37 90.60-110.80 X Type	1/100 1/100 1/100 1/100
SEC Job # G-8026 Well ID # BW105 Upgradient X_Downgradient Weather Conditions Clear Air Temperature 24 Total Well Depth (TWD) =	110.0 TOC 56.00 TOC	1/100 ft	Measuring Point Elevation Height of Riser (above lan Land Surface Elevation _ Screened Interval Dedicated Pump or Baller Steel Guard Pipe Around Locking Cap YES X	YES NO	671.55 TOC 2.18 669.37 90.60-110.80 X Type	1/100 1/100 1/100
SEC Job # G-8026 Weil ID # BW105 Upgradient X Downgradient Clear Weather Conditions Clear Air Temperature 24 Total Well Depth (TWD) =	56,00 TOC	1/100 ft	Land Surface Elevation _ Screened Interval Dedicated Pump or Baller Steel Guard Pipe Around Locking Cap YES X	YES NO	669.37 90.60-110.80 X Type	1/100
Upgradient X Downgradient Weather Conditions Clear Air Temperature 24 Total Well Depth (TWD) =	56,00 TOC	1/100 ft	Land Surface Elevation _ Screened Interval Dedicated Pump or Baller Steel Guard Pipe Around Locking Cap YES X	YES NO	669.37 90.60-110.80 X Type	
Weather Conditions Clear Air Temperature 24 Total Well Depth (TWD) =	56,00 TOC	1/100 ft	Screened Interval Dedicated Pump or Bailer Steel Guard Pipe Around Locking Cap YES X	YES NO	90.60-110.80 X _{Type}	1/100
Air Temperature 24 Total Well Depth (TWD) =	56,00 TOC	1/100 ft	Dedicated Pump or Baller Steel Guard Pipe Around Locking Cap YES X	YES NO	. 	
Air Temperature 24 Total Well Depth (TWD) =	56,00 TOC	1/100 ft	Steel Guard Pipe Around Locking Cap YES X	Casing YES	. 	
	56,00 TOC		Locking Cap YES X	-		
Depth to Ground Water (DGW) =		1/100 ft				
			Protective Post/Abutment	YESNO	<u>x</u>	
Length of Water Column (LWC) = TWD - DGW =		1/100 ft	 Well Integrity Setisfactory	YES X NO	<u> </u>	
1 Casing Volume (OCV) = LWC x .163 =	8.8	gal	Well Yield LOWN	ODERATE X	 нідн	
5 Casing Volumes = 44.0	gal = Standard Evacuation	on Volume	Remarks			
Method of Well Evacuation ISC	O Pump					
Method of Sample Collection ISC	O Pump					
Total Volume of Water Removed	45	gal				
		FIELD AN	NALYSES			
VOLUME PURGED (gallons) 9	18	27	36	45		
TIME (military) 10:00	10:20	10:50	11:30	12:00		
pH (S.U.) 6.71	7.83	7.78	7.57	7.46		
Eh (mV)		-				
Sp. Cond. (µmhos/cm) 303	207	203	193	186		
Water Temp. (°C) 15	14.5	15	15.5	16		
TURBIDITY (subjective) * 2		11		1		
A (4) Olana (0) Ollata (0) Madamata (4) Allata						
*(1) Clear (2) Slight (3) Moderate (4) High DMMENTS/OBSERVATIONS: Turbidmeter 9	9 Gal: 45.5, 18 gal: 31	07				



Page	1	of	2

Date (yr/mo/day) 90/09/19				Casing Diameter		4.0	Inch
Field Personnel R. Burdine				Casing Material	Sch, 40 PVC a	nd Stainless Steel	Riser
One Hame	rms RI/FS - Phas	se II		Measuring Point Elevation		371.55 (Ground Su	rface) 1/100
SEC Job # G-8026				Height of Riser (above land	surface)	NA	1/100
Well ID #BW105 (X	zone)			Land Surface Elevation		671.55	1/100
Upgradient_X_Dow			·	Screened Interval	Open Core Hol	e	1/100
Weather Conditions Sunny	Warm			Dedicated Pump or Baller	YESNO _	<u>Х т</u> уре	
Air Temperature 32			<u> </u>	Steel Guard Pipe Around C	esing YES X	NO	
Total Well Depth (TWD) =		139.00	1/100 ft	Locking Cap YES X	ю		
Depth to Ground Water (DGW) = _		N/A	1/100 ft	Protective Post/Abutment	YESNO X		
Length of Water Column (LWC) =	TWD - DGW =	90.00-102.70	1/100 ft	Well Integrity Satisfactory	YES X NO		
1 Casing Volume (OCV) = LWC x	0.67 =	8.40_	gal	Well Yield LOW X MC	DERATEHIG	н	
5 Casing Volumes =4	I.00 gal	= Standard Evacuation	on Volume	Remarks			
Method of Well Evacuation	1s	co Bladder Pump		Discrete Interval sar	npling with doub	ie packer assemb	ly and Isco
Method of Sample Collection	is	co Bladder Pump		Bladder Pump			
Total Volume of Water Removed		45.0	gal				
			FIELD	ANALYSES			
VOLUME PURGED (gallons)	5	10	15	20	25	30	35
TIME (military)	0748	0758	0810	0826	0837	0852	0910
pH (S.U.)	9.57	9.78	9.79	9.81	9.80	9.75	9.69
Eh (mV)					nd .	••	
Sp. Cond. (µmhos/cm)	179.5	172.7	168.3	172.3	169.5	170.5	159.0
Water Temp. (°C)	13	13	13	13	13	13	13
TURBIDITY (subjective) *	1	1	11_		1	1	<u> </u>
* (1) Clear (2) Slight (3) Moderate	(4) High						
OMMENTS/OBSERVATIONS:	Sampled X- zo	ne at 0945. Sampl	e identificati	on is BW105-1X.			



Page	2	of	2

	-					
Date (yr/mo/day)90/09/19				Casing Diameter	4.0	inches
Field Personnel R. Burdin	10			Casing Material Sch. 40	PVC and Stainless Steel Riser	
Site Name Medley F	arms RI/FS - Pha	se II		Measuring Point Elevation	671.55 (Ground Surface)	1/100 1
SEC Job # G-8026		***************************************		Height of Riser (above land surface)	NA	1/100 (
Well ID #BW105 ()	K-zone)			Land Surface Elevation	671.55	1/100 1
Upgradient_X_Do	•			Screened Interval Open Con	e Hole	1/100 (
Weather ConditionsSunn	y, Warm			Dedicated Pump or Bailer YES	1O <u>X Type</u>	
Air Temperature32			<u>~c</u>	Steel Guard Pipe Around Casing YES	X NO	
Total Well Depth (TWD) =			1/100 ft	Locking Cap YES X NO		
Depth to Ground Water (DGW) =		N/A	1/100 ft	Protective Post/Abutment YES	10 <u>X</u>	
Length of Water Column (LWC) :	= TWD - DGW =	90.00-102.70	1/100 ft	Well Integrity Satisfactory YES X I	4O	
1 Casing Volume (OCV) = LWC	. <u>0.67</u> =	8.40	gal	Well Yield LOW X MODERATE	нідн	
5 Casing Volumes =	41.00 gal	= Standard Evacuation	on Volume	Remarks		
Method of Well Evacuation	1:	sco Bladder Pump		* Discrete interval sampling wit	h double packer assembly and I	sco
Method of Sample Collection	1:	sco Bladder Pump		Bladder Pump	·	
Total Volume of Water Removed		45.0	gai			_
			FIELD	ANALYSES		
VOLUME PURGED (gallons)	40	45	T			•
TIME (military)	0928	0944				
pH (S.U.)	9.60	9.55				
Eh (mV)						
Sp. Cond. (μmhos/cm)	171.7	165.8				
Water Temp. (℃)	13	13	 			
TURBIDITY (subjective) *	1	<u> </u>	<u> </u>			
* (1) Clear (2) Slight (3) Moderal	e (4) High					
OMMENTS/OBSERVATIONS:	Sampled X-zo	ne at 0945. Sample	identification	on is BW105-1X.		



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Date (yr/mo/day) 90/09/18				Casing Diameter		4.0	Inches
	e, J. Wyli e			Casing Material	Sch. 40 PVC ar	nd Stainless Steel	Riser
Site Name Medley Fa	arms RI/FS - Pha	se II		Measuring Point Elevation	671.5	5 (Ground Surface	2) 1/100 H
SEC Job # G-8026				Height of Riser (above land a			1/100 ft
Well ID #BW105 (Y	'-zone)			Land Surface Elevation		671.55	1/100 ft
Upgradient_X_Do	wngradient			Screened interval			1/100 ft
Weather Conditions Sunny		. <u> </u>		Dedicated Pump or Bailer			·
Air Temperature23.3			<u>°C</u>	Steel Guard Pipe Around Car		_ ·	
Total Well Depth (TWD) =		139.00	1/100 ft	Locking Cap YES X NO			
Depth to Ground Water (DGW) =		N/A	1/100 ft	Protective Post/Abutment		_	
Length of Water Column (LWC) =	TWD - DGW =	123.50-110.80	1/100 ft	Well Integrity Satisfactory	YES X NO	-	
1 Casing Volume (OCV) = LWC x	0.67 =	8.4	gal	Well Yield LOW X MOD			
5 Casing Volumes =	11.91 gai	= Standard Evacuation	n Volume	Remarks			
Method of Well Evacuation	!	sco Bladder Pump		* Discrete interval sam	pling with doubl	e packer assembl	y and Isco
Method of Sample Collection	İ	sco Bladder Pump		Bladder Pump			
Total Volume of Water Removed		42.0	gal				
			FIELD	ANALYSES			
VOLUME PURGED (gallons)	5	10	15	20	25	30	35
TIME (military)	1752	1805	1815	1828	1841	1858	1911
pH (S.U.)	9.0	7.9	8.49	8.71	8.78	8.40	8.42
Eh (mV)		-				••	
Sp. Cond. (μmhos/cm)	184.3	170.3	157.4	179.4	169.4	177.3	169.2
Water Temp. (°C)	15	14.5	14.5	14.5	14.5	14.5	14.5
TURBIDITY (subjective) *	1	1	11	1	1	1	
* (1) Clear (2) Slight (3) Moderat	e (4) High						
OMMENTS/OBSERVATIONS:	Sampled Y-zor	ne (123.5-110.8) at 1	937. EPA Ir	dicates concern regarding a	ir bubbles in sai	npie line. Sample	identification



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00/00/19						·
Date (yr/mo/day) 90/09/18	- 1 344 47			Casing Diameter		Inches
Field Personnel R. Burdin	e, J. Wylie			Casing Material Sch	<u>ı, 40 PVC and Stainless Steel Rise</u> ı	
Site Name Mediay F SEC Job # G-8026	arms RI/FS - Phase))	Measuring Point Elevation	671.55 (Ground Surface)	1/100 ft
SEC Job # G-8026				Height of Riser (above land surface)NA	1/100 ft
Well ID # BW105	(Y-zone)		\	Land Surface Elevation	671.55	1/100 ft
Upgradient_X_Do	_		ł	Screened Interval Open	Core Hole	1/100 ft
Weather ConditionsSunn	У	 		Dedicated Pump or Bailer YES _	NO X Type	
Air Temperature 23.3		···	<u>~c</u> │	Steel Guard Pipe Around Casing	YES X NO	
Total Well Depth (TWD) =		139.00	/100 ft	Locking Cap YES X NO	<u> </u>	
Depth to Ground Water (DGW) =		N/A	/100 ft	Protective Post/Abutment YES	NO X	
Length of Water Column (LWC) :	* TWD - DGW =	123.50-110.80	/100 ft	Well Integrity Satisfactory YES	X NO	
1 Casing Volume (OCV) = LWC	c <u>0.67</u> =	8.4	gal	Well Yield LOW X MODERATI	E <u>H</u> IGH	
5 Casing Volumes =	11.91 gal =	Standard Evacuation V	olume	Remarks		
Method of Well Evacuation	lsc	o Bladder Pump		* Discrete interval sampling	with double packer assembly and	Isco
Method of Sample Collection	lso	o Bladder Pump		Bladder Pump		
Total Volume of Water Removed		42.0	gal			
			FIELD A	NALYSES		·
VOLUME PURGED (gallons)	41					
TIME (military)	1928					
pH (S.U.)	8.40					
Eh (mV)						
Sp. Cond. (μmhos/cm)	177.0					
Water Temp. (°C)	14.5					
TURBIDITY (subjective) *	1l					
*(1) Clear (2) Slight (3) Moderat	e (4) High					
COMMENTS/OBSERVATIONS:				· · ·		



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Date (yr/mo/day) 90/09/18 Field Personnel R. Burdine			Casing Diameter 4.0 Casing Material Sch. 40 PVC and Stainless Steel Riser			inch I Bloos	
11010 1 0100111101	rms RI/FS - Phas						
G-9026	11110 11110		1 1	Measuring Point Elevat			Surface) 1/100
SEC 100 #				Height of Riser (above	iand surface)		1/10
Well ID #BW105 (Z-	zone)			Land Surface Elevation			1/100
Upgrådlent_X_Dow			[[Screened Interval	Open Core Hol	θ	1/100
Weather ConditionsSunny	, Warm, Breezy			Dedicated Pump or Bai	ler YESNO _	Х туре	
Air Temperature32			<u>°C</u>	Steel Guard Pipe Arour	d Casing YES X	NO	
Total Well Depth (TWD) =		139.00	1/100 ft	Locking Cap YES	(NO		
Depth to Ground Water (DGW) = _		N/A	1/100 ft	Protective Post/Abutme		<u> </u>	
Length of Water Column (LWC) =			1/100 ft	Well Integrity Satisfacto			
1 Casing Volume (OCV) = LWC x	0.670 =	7.91		Well Yield LOW X			
5 Casing Volumes = 39				Remarks			
Method of Well Evacuation		co Bladder Pump		* Discrete Interval		packer assembly	and Isco Blade
Method of Sample Collection	·· · · · · · · · · · · · · · · · · · ·	co Bladder Pump		Pump.			
Total Volume of Water Removed			gal				
			FIELD ANA	ALYSES			
VOLUME PURGED (gallons)	5	10	15	20	25	30	35
TIME (military)	1414	1424	1434	1444	1454	1503	1512
pH (S.U.)	7.81	8.79	9.24	9.35	9.45	9.49	9.49
Eh (mV)							
Sp. Cond. (µmhos/cm)	234	203	189	189.2	187.6	185.3	184.9
Water Temp. (°C)	19	18.8	15	15	15	15	15
TURBIDITY (subjective) *	2	2	2	2	2	2	2
* (1) Clear (2) Slight (3) Moderate	(4) High						



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Date (yr/mo/day) 90/09/18	-			Casing Diameter		4.0	Inches
Field Personnel R. Burdine				Casing Material	Sch. 40 PVC	and Stainless Steel Riser	
Out 1481116	rms RI/FS - Phas	ie II		Measuring Point Elevation	n <u>67</u>	1.55 (Ground Surface)	1/100 ft
SEC Job #G-8026	·	·		Height of Riser (above las	nd surface)	NA	1/100 ft
Well ID # BW105 (Z-	zone)			Land Surface Elevation	-	671.55	1/100 f
Upgradient_X_Dow				Screened Interval	Open Core Ho	ie	1/100 f
Weather Conditions Sunny	Warm, Breezy			Dedicated Pump or Bailer	YESNO _	<u> Х т</u> уре	
Air Temperature32			<u>°C</u>	Steel Guard Pipe Around	Casing YES X	NO	
Total Well Depth (TWD) =		139.00	1/100 ft	Locking Cap YES X		- -	
Depth to Ground Water (DGW) = _		N/A_	1/100 ft	Protective Post/Abutmen	YESNO	<u>C_</u>	
Length of Water Column (LWC) =	TWD - DGW =	127.20-139.00	1/100 ft	Well Integrity Satisfactors	YES X NO	<u> </u>	
1 Casing Volume (OCV) = LWC x	0.670 =	7.91	gai	Well Yield LOW X	ODERATEH	эн	
5 Casing Volumes = 39).53 gal :	= Standard Evacuation	n Volume	Remarks			
Method of Well Evacuation	ls	co Bladder Pump		Discrete interval sar	mpling with single	packer assembly and Is	co Bladde
Method of Sample Collection	ls	co Bladder Pump		Pump.			
Total Volume of Water Removed		65	gal				
	<u></u>		FIELD A	NALYSES			
VOLUME PURGED (gallons)	40	45	50	55	60	65	
TIME (military)	1522	1532	1542	1551	1600	1610	
рН (S.U.)	9.5	9.45	9.45	9.43	9.36	9.32	
Eh (mV)							
Sp. Cond. (µmhos/cm)	177.8	182.5	180.6	177.8	180.2	182.9	
Water Temp. (°C)	15	15	15	15	15	15	
TURBIDITY (subjective) *	2	12	2	2	22		
* (1) Clear (2) Slight (3) Moderate	(A) High						
					 		



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P.O. Box 24000 Greenville, SC 29616

Date (yr/mo/day) : 90/9/28			Casing Diameter	2.0	inches
Field Personnel G. Overby/S. Asqu	ith		Casing Material	Stainless Steel	Inones
Site Name Mediey Farms RI/F	S - Phase II		Measuring Point Elevation	595.76 TOC	1/100 ft
SEC Job # G-8026			Height of Riser (above land surface)	3.25	1/100 ft
Well ID #BW106			Land Surface Elevation		1/100 ft
Upgradient_X_Downgradient			Screened interval		1/100 ft
Weather Conditions Hazy with	clouds		Dedicated Pump or Bailer YESNO		-
Air Temperature16		<u>°C</u>	Steel Guard Pipe Around Casing YES	X NO	
Total Well Depth (TWD) =	79.0 TOC	1/100 ft	Locking Cap YES X NO		
Depth to Ground Water (DGW) =	50.0 TOC	1/100 ft	Protective Post/Abutment YESNO	<u> </u>	
Length of Water Column (LWC) = TWD - DGW =	29.0	1/100 ft	Well integrity Satisfactory YES X NO		
1 Casing Volume (OCV) = LWC x <u>0.163</u> = _	51.1	gal	Well Yield LOW X MODERATE	HIGH	
5 Casing Volumes = 258	gal = Standard Evacuat	ion Volume	Remarks Sample submitted for no	n-CLP 24 hr. turnaround	
Method of Well Evacuation Subm	ersible Pump/Isco 26	00		<u> </u>	
Method of Sample Collection	Isco Model 2600	<u> </u>			
Total Volume of Water Removed	258	gal			

			FIELD ANAL	YSES			
VOLUME PURGED (gallons)	51.1	102.2	127.7	153.2	178.7	204.2	222.0
TIME (military)	08:00	08:05	08:08	08:10	08:13	8:15	09:30
pH (S.U.)	7.0	7.0	7.0	7.0	6.9	6.9	6.7
Eh (mV)							
Sp. Cond. (µmhos/cm)	173	137	133	133	131	133	139
Water Temp. (°C)	13.0	13.0	13.0	13.0	13.0	13.0	13
TURBIDITY (subjective) *	2	2	2	2	2	2	2

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: 1st Turb > 100; 2nd Turb: 98; 3rd Turb: 95; 4th Turb: 92; 5th Turb: 95; 6th Turb: >100; 7th Turb: >100 NTU; 8th Turb: > 100 9th Turb: >100.



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Date (yr/mo/day)	90/9/27			Casi	ng Diameter		2.0	inches
Field Personnel G. Ov					ng Material		Stainless Steel	
Site Name Medie	y Farms RI/FS -	Phase II		j j		ation	595.76 TOC	1/100 f
SEC Job # G-802	6					e land surface)		1/100 f
Well ID # BW10	6		_			n		1/100 f
Ungradient X Do	wngradient							1/100 f
Weather Conditions	Hazy with clo	ouds				ailer YES NO		
Air Temperature	16		_ ℃		-	und Casing YES		
Total Well Depth (TWD) =		79.0 TOC	1/100 ft	1	ing Cap YES	_		
Depth to Ground Water (DGW) =		 -	1/100 ft	J	_	nent YES NO	X	
Length of Water Column (LWC) ≈		· · · · · · · · · · · · · · · · · · ·	1/100 ft	1		tory YES X NO		
1 Casing Volume (OCV) = LWC x			gal		•	MODERATE		
5 Casing Volumes = 25							n-CLP 24 hr. turnarou	ınd
Method of Well Evacuation								
Method of Sample Collection		o Model 2600		-		·-		
Total Volume of Water Removed		258	gal					
			FIELD	ANALY:	SES			
VOLUME PURGED (gallons)	240.0	258	T					
TIME (military)	09:42	09:57						
pH (S.U.)	6.7	6.5						
Eh (mV)	P.4							
Sp. Cond. (μmhos/cm)	149	145						
Water Temp. (°C)	13	13						
TURBIDITY (subjective) *	2	2						
* (1) Clear (2) Slight (3) Moderate	• (4) High							
		2nd Turb: 98: 3rd	Turb: 95: 4th	Turb: 9	: 5th Turb: 95:	6th Turb; >100: 7tl	h Turb: >100 NTU; 8th	Turb: > 100
	9th Turb; >100.				, (



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Date (yr/mo/day)	(yr/mo/day) 90/10/2					4.0	inche
Field Personnel D. Detwiler, S. Asquith				Casing Material Stainless Steel			
Site Name Medle	y Farms RI/FS -	Phase II		Measuring Point Elevation	on	605.64 TOC	1/100 1
SEC Job # G-802	6			Height of Riser (above la	nd surface)	2.49	1/100
Well ID #BW10	8			Land Surface Elevation		603.15	1/100
Upgradient_X_Dov				Screened Interval		73.80-93.90	1/100
Weather Conditions	Clear			Dedicated Pump or Baile	r YES NO	<u>Х Т</u> уре	
Air Temperature	21	****	<u>°C</u>	Steel Guard Pipe Around	Casing YES X	NO	
Total Well Depth (TWD) =		93.80 TOC	1/100 ft	Locking Cap YES X	NO	- <u></u>	•
Depth to Ground Water (DGW) =		5.65 TPC	1/100 ft	Protective Post/Abutmer	nt YESNO	<u>x</u>	
Length of Water Column (LWC) =	TWD - DGW =	88.15	1/100 ft	Weil Integrity Satisfactor	y YES X NO		
1 Casing Volume (OCV) = LWC x	.653 =	57.56	gal	Well Yield LOW	MODERATEH	 GH <u>X</u> _	
5 Casing Volumes =28	7.81 gal	= Standard Evacuation	on Volume	Remarks			
Method of Well Evacuation	ISCO	Pump					
Method of Sample Collection	ISCO	Pump				<u> </u>	·
Total Volume of Water Removed	29	0	gal				
	<u> </u>		FIELD AN	IALYSES			
VOLUME PURGED (gallons)	57.5	115	172.5	230	287.5	1	
TIME (military)	11:05	12:37	13:35	15:17	16:20		
pH (S.U.)	9.40	8.94	8.83	8.82	11.20		
Eh (mV)		**			-9		
Sp. Cond. (µmhos/cm)	184	175	178	173	397		
Water Temp. (°C)	13.8	13.5	13.5	13.5	13.5		
TURBIDITY (subjective) *	1	11	1_1_	11	11		
* (1) Clear (2) Slight (3) Moderate	e (4) High						:-
OMMENTS/OBSERVATIONS:	1st Turb: 29 NTI	J. 2nd Turb: 17 NT	U. 3rd Turb: 12	NTU, 4th Turb: 5.0 NTU	J. 5th Turb: 25 N1		



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Date (yr/mo/day)	90/10/15		c	sing Diameter		4.0	inche
Field Personnel D. Det	wiler			sing Material	Sch. 40	PVC and Stainless Ste	el Riser
Site Name Medley	y Farms RI/FS -	Phase II	1 1	easuring Point Elevation			1/100 1
SEC Job # G-8026	S		1 1	eight of Riser (above is			1/100
Well ID #BW109			1 1	and Surface Elevation			1/100
Upgradient_X_Dow			1 1	reened interval			1/100 1
Weather Conditions	Clear		D	edicated Pump or Baile	r YES NO	X Type	
Air Temperature	29		1 1	eel Guard Pipe Around			
Total Well Depth (TWD) =		88.50 TOC	1 1	cking Cap YES X	_	-	
Depth to Ground Water (DGW) = _		57.43 TPC		otective Post/Abutmer		X	
Length of Water Column (LWC) =			1/100 ft W	eil Integrity Satisfactor	y YES X NO		
1 Casing Volume (OCV) = LWC x				ell Yield LOW	-		
5 Casing Volumes = 101	1.44 gal	= Standard Evacuati		emarks			
Method of Well Evacuation	ISCO	Pump					
Method of Sample Collection	ISCO	Pump					
Total Volume of Water Removed	10	1	gal				
		- · · · · · · · · · · · · · · · · · · ·	FIELD ANAL	YSES			
VOLUME PURGED (gallons)	20	40	60	80	101		
TIME (military)	15:15	15:45	16:05	16:40	17:15		
рH (S.U.)	8.31	6.84	6.58	6.34	6.39		
Eh (mV)							
Sp. Cond. (μmhos/cm)	203	159	145	141	135		
Water Temp. (°C)	16	16	16	14.5	14.5		
TURBIDITY (subjective) *	1	1	11	1	11		
	445 141-4						
*(1) Clear (2) Slight (3) Moderate	(4) High		, 60 gal: 6.3, 80 gal				



_	4	_	4
Page	•	of	1
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P.O. Box 24000 Greenville, SC 29616

Date (yr/mo/day) 90/10/16 Casing Diameter	4.0	inches
Field Personnel D. Detwiler Casing Material Sch. 40 PVC	and Stainless Steel I	Riser
Site Name Medley Farms RI/FS - Phase II Measuring Point Elevation		1/100 ft
SEC Job # G-8026 Height of Riser (above land surface)		1/100 ft
Well ID # BW110 Land Surface Elevation		1/100 ft
Upgradient_X_Downgradient Screened Interval		1/100 ft
Weather Conditions Clear Dedicated Pump or Bailer YES NO X T		
Air Temperature 21		
Total Well Depth (TWD) = 85.00 TOC 1/100 ft Locking Cap YES X NO		
Depth to Ground Water (DGW) = 52.11 TPC 1/100 ft Protective Post/Abutment YES NO X		
Length of Water Column (LWC) = TWD - DGW = 32.89 1/100 ft Well integrity Satisfactory YES X NO		
1 Casing Volume (OCV) = LWC x653 = 21.48 Well Yield LOWMODERATEHIGH	<u>x</u>	
5 Casing Volumes = 107.38 gal = Standard Evacuation Volume Remarks Bladder of Timco Bailer failed.	Bailed last 20 gallons u	gnisu
Method of Well Evacuation Timco Isomega Pump tefion bailer and collected sample with te	eflon bailer.	
Method of Sample Collection Teflon Bailer		
Total Volume of Water Removed 107.5 gal		
FIELD ANALYSES		
VOLUME PURGED (gallons) 21.5 43 64.5 86 107.5	15	

			FIELD ANALY	SES			
VOLUME PURGED (gallons)	21.5	43	64.5	86	107.5	15	
TIME (military)	11:25	14:50	15:25	15:55	16:20	11:10	
pH (S.U.)	11.28	9.22	9.10	8.88	8.79	10.8	
Eh (mV)	••						
Sp. Cond. (µmhos/cm)	432	251	279	271	260	366	
Water Temp. (°C)	14.5	14.5	14.5	14.5	14.5	15	
TURBIDITY (subjective) *	1	1	1	1.5	1	1	

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS:	Turbidmeter 11 gal: 12, 21.5 gal: 11, 43 gal: 30, 64.5 gal: 25, 86 gal: 52, 107.5 gal: 37

Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Page 1 of 1

<u></u>			
Date (yr/mo/day)	90/11/27		
Field Personnel	OVERBY		
Site Name	MEDLEY FARMS	RI/FS - PHASE II	
SEC Job #	G-8026		
Well ID #	BW1		
X Upgradient			
Weather Conditions		Y, WARM	
Air Temperature	72° F		<u>°C</u>
Total Well Depth (TWD) =	94.8		1/100 ft
Depth to Ground Water (DG)	W) = <u>50.6</u>		1/100 ft
Length of Water Column (LW	/C) = TWD - DGW :	= 44.2	1/100 ft
1 Casing Volume (OCV) = LV	WC x .652 =	29	gal
5 Casing Volumes =	145	gal = Standard Ev	scuation Volume
Method of Well Evacuation			i
Method of Sample Collection	Teffon B	Bailer	
Total Volume of Water Remo	ved 125		gal

Casing Diameter	4.0	Inches
Casing Material Sch. 4	0 PVC & Stainless Steel	· · · · · ·
Measuring Point Elevation	689,90	1/100 ft
Height of Riser (above land surface)	1.5	1/100 ft
Land Surface Elevation	688.65	1/100 ft
Screened Interval	85.6-94.8	1/100 ft
Dedicated Pump or Bailer YESNO	X_Type	
Steel Guard Pipe Around Casing YES X	NO	
Locking Cap YES X NO		
Protective Post/Abutment YESNO	<u>x</u> _	
Well integrity Satisfactory YES X NO		
Well Yield LOWMODERATEH	IGH <u>X</u>	
	- 	

VOLUME PURGED (gallons)
TIME (military)
pH (S.U.)
Eh
Sp. Cond. (µmhos/cm)
Water Temp. (℃)
TURRIDITY (subjective) *

		FIELD ANALY	'SES		
30	60	90	125	Sample collected	
15:10	15:40	16:00	16:25	at 16:30	
9.2	6.6	6.7	6.7		
-	_	-			
140	124	123	125		
15	15	15	15		
1	1	1	1		

*	(1) Clear	(2) Slight	(3) Moderate	(4)	High

COMMENTS/OBSERVATIONS: Samples collected were BW1-4 & BW1-4A

Pag		1	of	1
2	•	•	٠.	•

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Date (yr/mo/day)90/	11/27			Casing Diameter		2.0	Inches
Field Personnel OV	ERBY			Casing Material	Sch. 40	PVC & Stainless Steel	
Site Name ME	DLEY FARMS RI/FS -	PHASE II		Messuring Point Elevation		690,47	1/100 ft
SEC Job # G-	8026			Height of Riser (above land	d surface)	2.4	1/100 ft
Well ID # SY	W1			Land Surface Elevation		688.66	1/100 ft
X_UpgradientD	owngradient		1 1	Screened Interval		44.2-59.4	1/100 ft
Weather Conditions	PARTLY CLOUI	<u> </u>		Dedicated Pump or Bailer	YESNO _)	С_Туре	
Air Temperature	72° F		<u>•c</u>	Steel Guard Pipe Around C	casing YES X	NO	
Total Well Depth (TWD) =	59.4		1/100 ft	Locking Cap YES X	·	· 	
Depth to Ground Water (DGW) :	50.4		1/100 ft	Protective Post/Abutment	=		
Length of Water Column (LWC)	= TWD - DGW =	9.0	1/100 ft	Well Integrity Satisfactory	YES X_NO _		
1 Casing Volume (OCV) = LWC	x 0.163 =	1.5	gal	Well Yield LOWMODERATE X HIGH			
5 Casing Volumes =	7.5 gal =	Standard Evacuation	on Volume	Remarks			
Method of Well Evacuation	Teflon Baller						
			} } }	•			
Method of Sample Collection	Teflon Bailer						
Method of Sample Collection Total Volume of Water Removed			gal				
_			gal FIELD AN	IALYSES			
_		3			Sample collected		
Total Volume of Water Removed	8	3 14:00	FIELD AN	8	Sample collected at 14:15		
Total Volume of Water Removed VOLUME PURGED (gallons)	2		FIELD AN	8			
Total Volume of Water Removed VOLUME PURGED (gallons) TIME (military)	2 13:55	14:00	FIELD AN 5 14:05	8 14:10			
VOLUME PURGED (gallons) TIME (military) pH (S.U.)	2 13:55 6.1	14:00 5.8	FIELD AN 5 14:05 5.9	8 14:10 5.9			
VOLUME PURGED (gallons) TIME (military) pH (S.U.)	2 13:55 6.1	14:00 5.8 —	FIELD AN 5 14:05 5.9	8 14:10 5.9			

Samples collected were SW1-4, SW1-4A & SW1-4C

COMMENTS/OBSERVATIONS:

Page	1	of	1	

Sirrine Environmental Consultants P.O. Box 24000 Greenville, SC 29616

Date (yr/mo/day)	90/11/26		
Field Personnel	OVERBY		
Site Name	MEDLEY FARMS	RI/FS - PHASE II	
SEC Job#	G-8026		
Well ID #	SW106		
Upgradient_X			-
Weather Conditions	CLEAR/	MILD	
Air Temperature	68° F	·	℃
Total Well Depth (TWD) =			1/100 ft
Depth to Ground Water (DGW	n = <u>11.5</u>	,-,, -, <u></u>	1/100 ft
Length of Water Column (LW	C) = TWD - DGW	= 12.95	1/100 ft
1 Casing Volume (OCV) = LW	C x 0.163 =	2.1	gal
5 Casing Volumes =	10.5	gal = Standard Eva	cuation Volume
Method of Well Evacuation	Teflon I	Baller	
Method of Sample Collection	Teflon E	Baller	
Total Volume of Water Remov	red 10		gal

Casing Diameter	2.0	Inches
Çasing MaterialS	ch. 40 PVC & Stainless Steel	
Measuring Point Elevation	596,12	1/100 ft
Height of Riser (above land surface)	3.21	1/100 ft
Land Surface Elevation	592.91	1/100 ft
Screened Interval	5.82-21.00	1/100 ft
Steel Guard Pipe Around Casing YES Locking Cap YES X NO Protective Post/Abutment YES Well Integrity Satisfactory YES X	NO <u>X</u>	

FIELD ANALYSES						
VOLUME PURGED (gallons)	3.0	5.0	8.0	10.0	Sample collected	
TIME (military)	15:40	15:50	16:05	16:20	at 16:25	
pH (S.U.)	5.6	5.7	5.7	5.58		
Eh	-	-		-		
Sp. Cond. (µmhos/cm)	92	88	88	86		
Water Temp. (°C)	16	15	15	15		
TURBIDITY (subjective) *	4	4	4	4		

*(1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: Samples collected were SW106-4, SW106-4A.

Sirrine	Environmental	i Consultants
P.O. Bo	x 24000	
Greenv	ille, SC 29616	

Page	1	of	1	

Date (yr/mo/day)	90/11/26	
Field Personnel	OVERBY	
Site Name	MEDLEY FARMS RVFS - PHASE II	
SEC Job #	G-8026	
Well ID #		
Upgradient_X		
Weather Conditions	CLEAR/WARM	
Air Temperature	75 ° F	~€
Total Well Depth (TWD) =	31.0	1/100 ft
Depth to Ground Water (DGV	V) = 6.55	1/100 ft
Length of Water Column (LW	C) = TWD - DGW =24.85	1/100 ft
1 Casing Volume (OCV) = LV	VC x 0.652 = 16.22	gal
5 Casing Volumes =	81.01 gal = Standard Eva	cuation Volume
Method of Well Evacuation	Tefion Baller	
Method of Sample Collection	Teflon Bailer	
Total Volume of Water Remo		gal

	Inches
PVC & Stainless Steel	
564.32	1/100 ft
562.65	1/100 ft
18.0-31.0	1/100 ft
	
	564,32 1.8 562.65 18.0-31.0 (

VOLUME PURGED (gallons)
TIME (military)
pH (S.U.)
Eh
Sp. Cond. (μmhos/cm)
Water Temp. (°C)
TURBIDITY (subjective) *

		FIELD ANALY	'SES		
16	50	65	80	Sample collected	
14:20	14:35	14:50	14:55	at 15:00	
6	6.4	6.4	6.3		
-	_	-	- .		
323	240	221	230		1
16	15	15	15		
4	4	3	3		

* (1) Clear	(2) Slight	(3) Moderate	(4) High

COMMENTS/OBSERVATIONS: Samples collected were BW4-4, BW4-4A, & BW4-4C

APPENDIX J
PHYSICAL SOIL ANALYSIS

Laboratory Test Procedures

GRAIN SIZE TESTS (ASTM D-422)

The soil specimen is prepared and tested to determine the percentages of particles within a range of sizes. The distribution of particles larger than 75 microns (retained on No. 200 sieve) is determined bu sieving, while smaller particle sizes are measured by a sedimentation process with a hydrometer.

The soil specimen is prepared by drying with the material retained on No. 200 sieve passed through a series of nested sieves. The portion retained on each sieve is weighed, and the percent of the total sample retained on each sieve is computed and plotted on the attached Grain Size Distribution Sheets.

The fine grained soil distribution (silt and clay particles is determined using the hydrometer. A dried soil specimen of 50 grams is place in suspension using distilled water and dispersing agent. The density of the solution is measured with the hydrometer over selected time intervals, and the particle size and weights are computed. These values give a curve or distribution for various particle sizes of microscopic silt and clay size particles presented as an to the curves depicting extension the grain distribution of the soil fraction coarser than the No. 200 These plots are attached on the Grain Size Distribution sheets.

MOISTURE CONTENT DETERMINATION (ASTM D-2216)

Each sample was weighed to 200 grams then placed in an oven set to about 140°F. The dried sample was removed from the oven and weighed. The moisture content was computed by dividing the weight of evaporated water by the weight of the dry sample. The results expressed as a percent, are presented on the attached Grain Sized Distribution Data Sheets.

ATTERBERG LIMITS (ASTM D-4318)

Determined the soil's plasticity characteristics. The plasticity index (PI) is the range of moisture content over which the soil deformed as a plastic material. The liquid limit is the moisture content at which the soil becomes sufficiently "wet" to flow as a heavy viscous fluid. The plastic limit (PL) is the lowest moisture content at which the soil is sufficiently plastic to be manually rolled into 1 1/2" threads 1/8" in diameter. The results of these tests are presented on the attached Grain Size Distribution Data Sheets.

Laboratory Test Procedures

TOTAL ORGANIC CARBON ANALYZER (DC-80) - Equivalent to ASTM D-2579-85

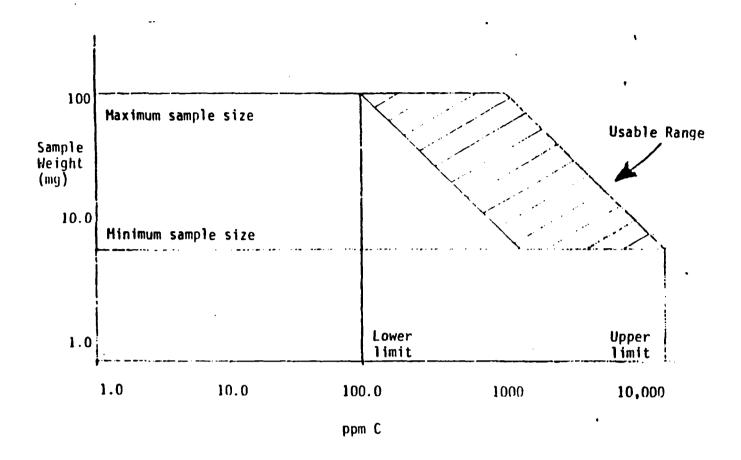
The high temperature DC-80 system operates on the concept of sparging, oxidation, and infrared detections, as does the low-temperature system. However, oxidation in this case is performed in a quartz combustion tube in oxygen atmosphere, at approximately 800°C. The combustion tube is placed in the PRG-1 Furnace Module. The high temperature method has one primary advantage: it oxides almost every substance likely to occur in a water sample. This makes this technique amenable to determination of sludges and sediments.

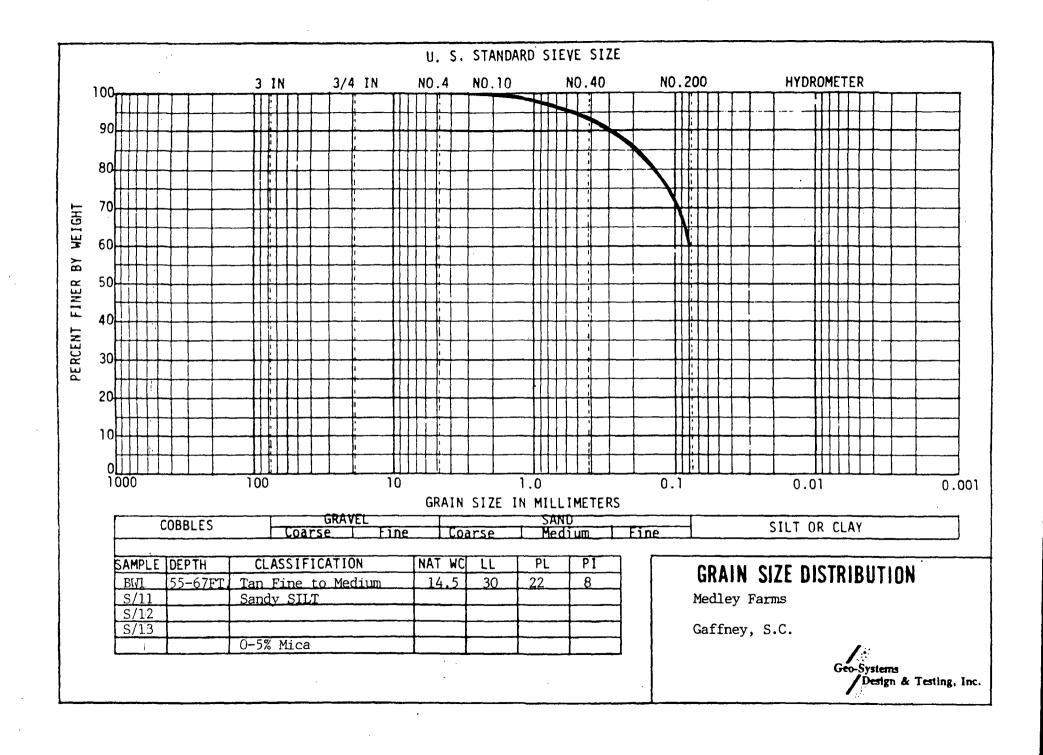
The high temperature system is operated with single-point calibration with results read in concentration units. Accuracy will depend upon accuracy of known standard calibration solutions.

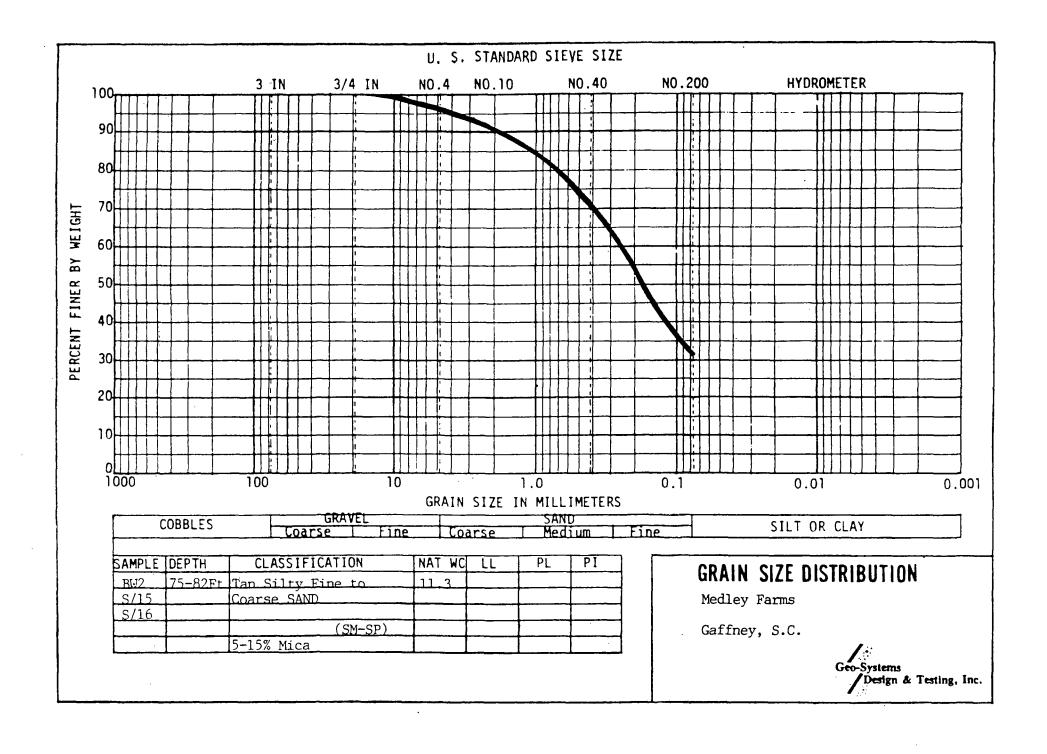
Prior to installation, the rubber gasket on the inlet side of the PRG-1 should be removed. This gasket is only used to position the normal purgeable analysis combustion tube. The installation of the solid sampler is easy and straight forward, but the plumbing is slightly different from the PRG Module. Reference the Assembly Drawing, 880-654.

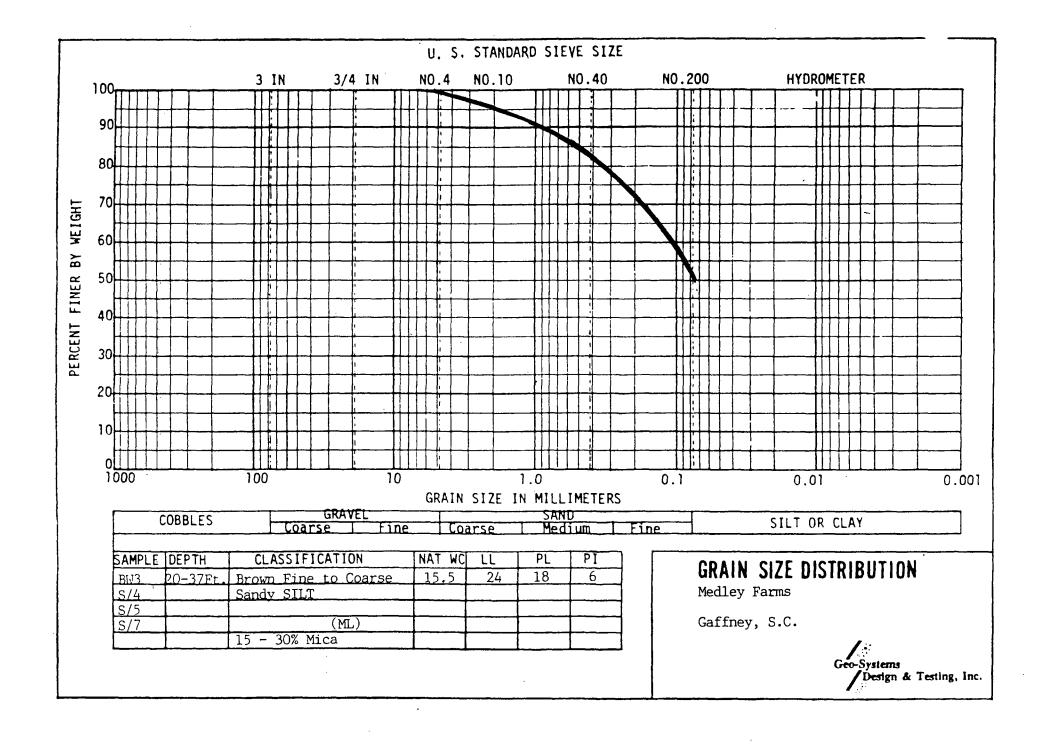
- 1. Referencing the Operating Kit (P/N 899-512) locate all necessary parts to complete the installation.
- Place the PRG Module to the right side of the main DC-80 Reaction Module leaving about 12 inches in between. Make sure that power is off.
- 3. Pack 1 1/2 to 1 3/4 inch section from the dimple of the combustion tube (P/N 511-533) with the oxidation promoter (P/N 511-883) and hold in place with quartz wool.

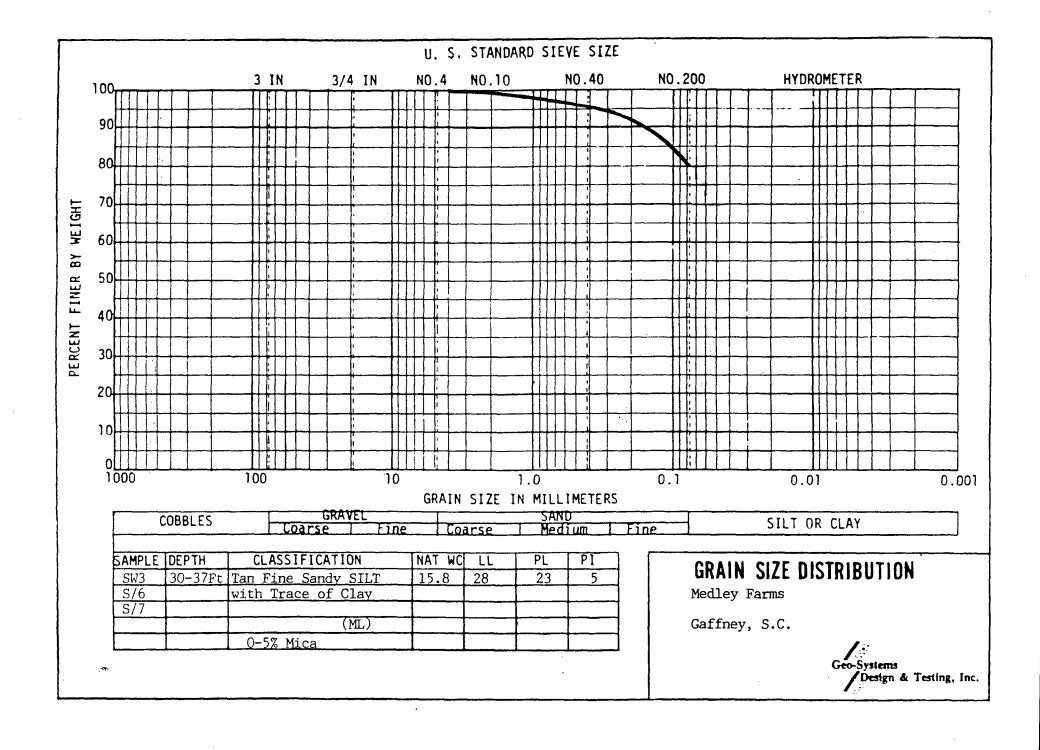
Solid Sample Size vs Carbon Concentrations

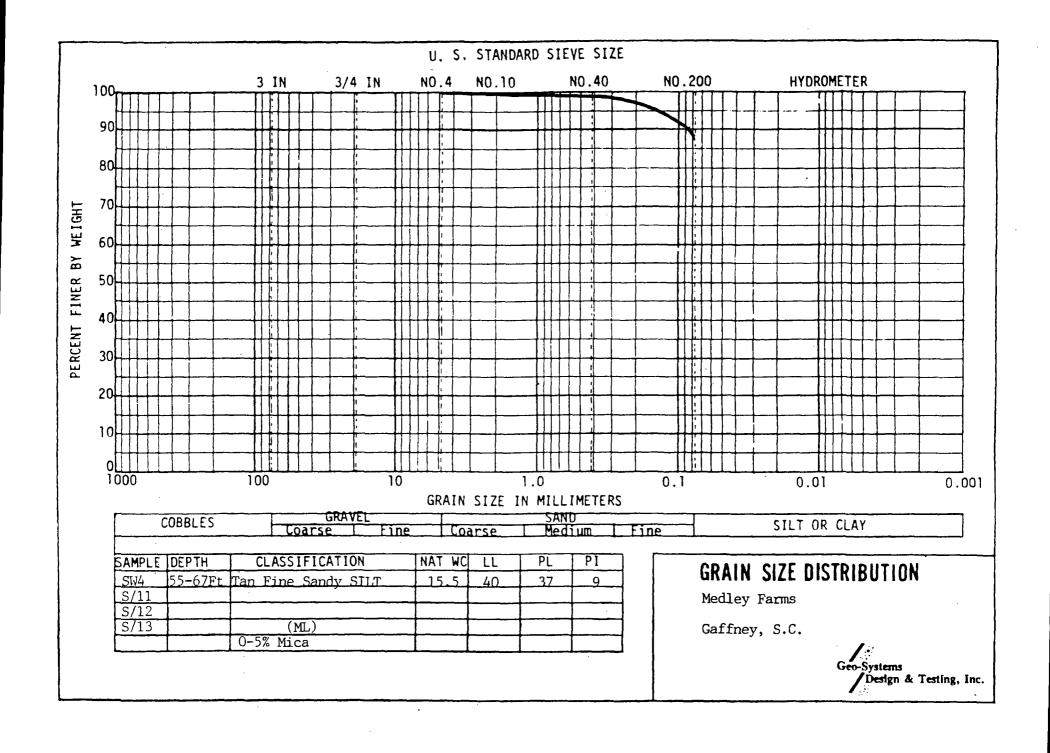


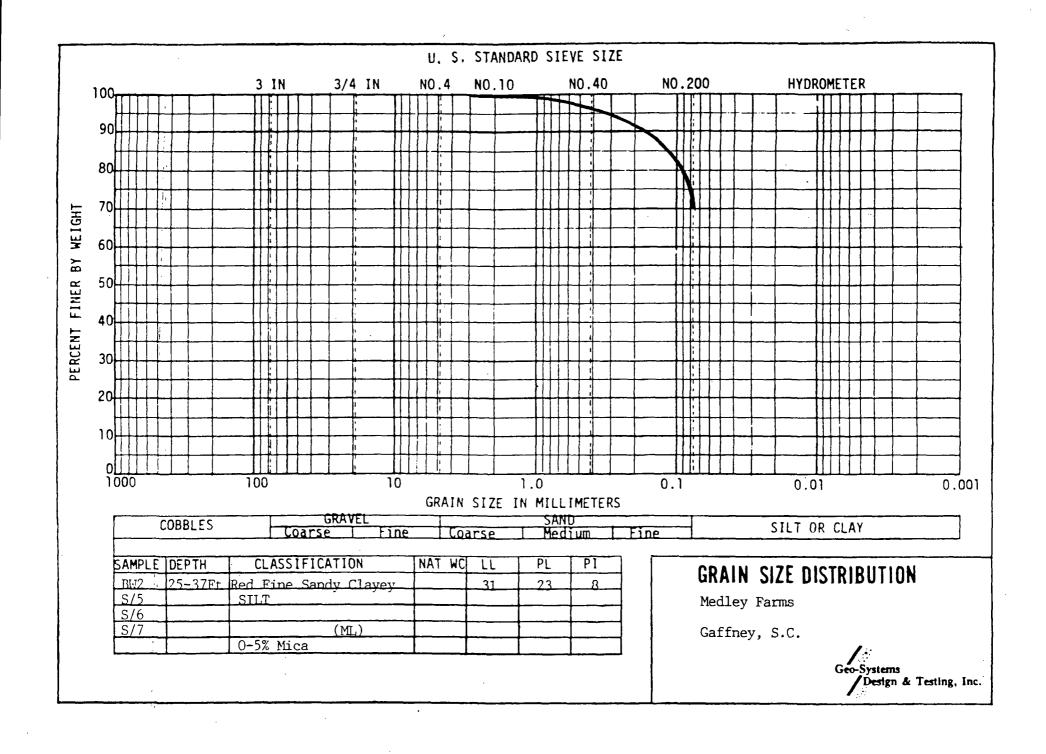


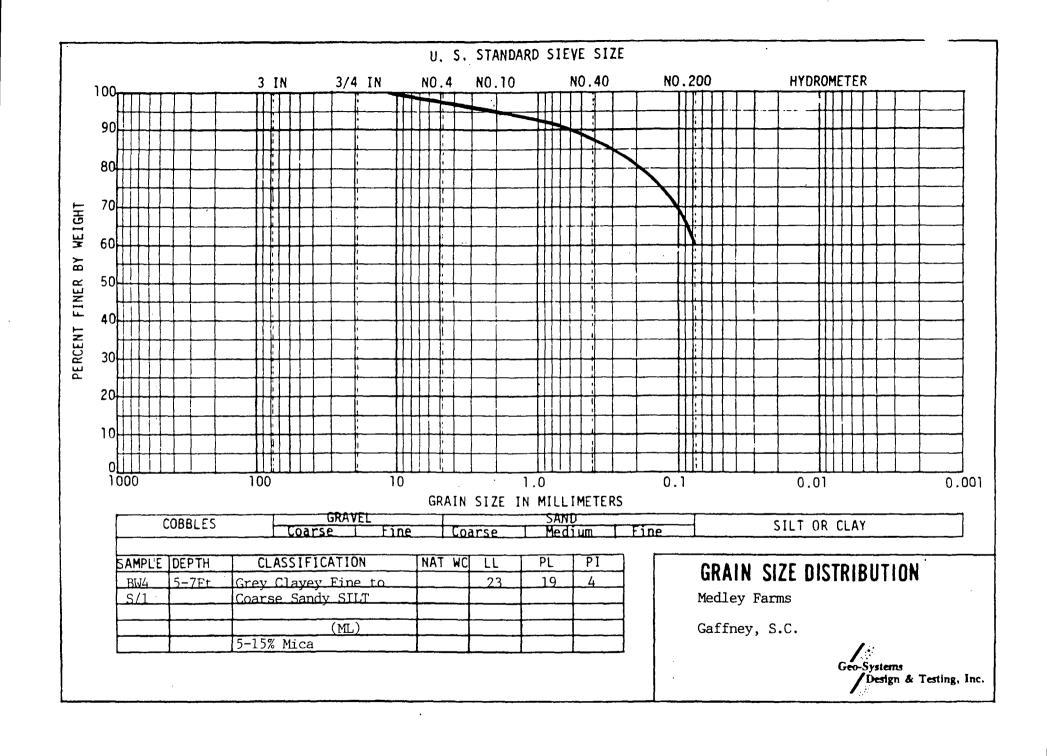


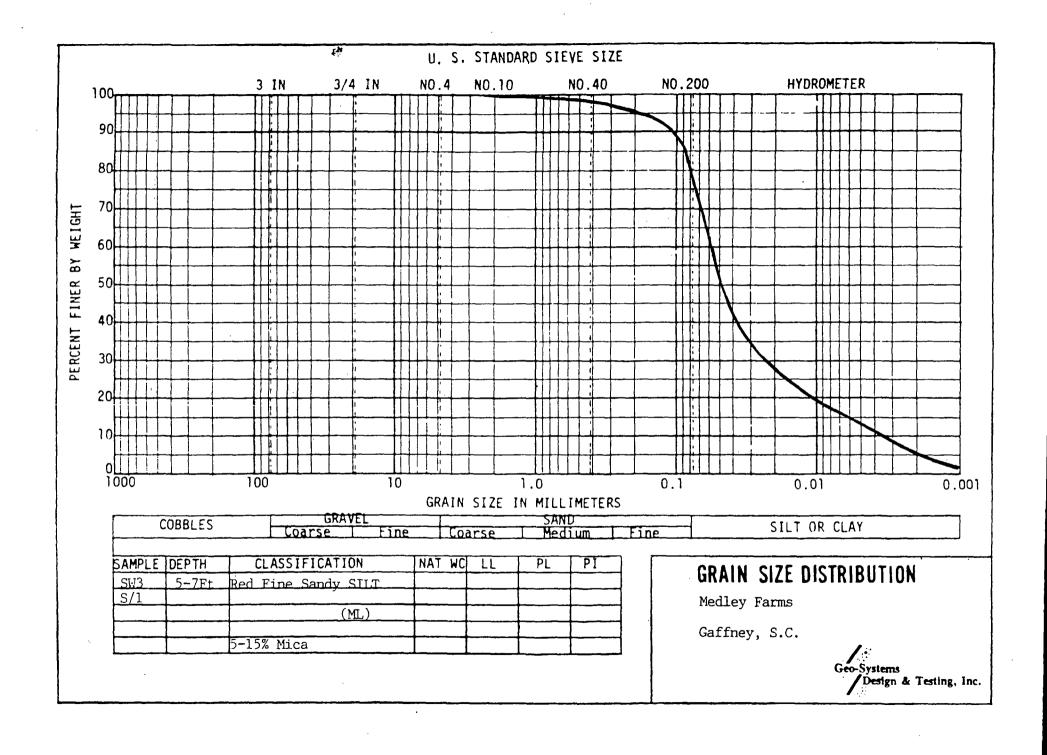


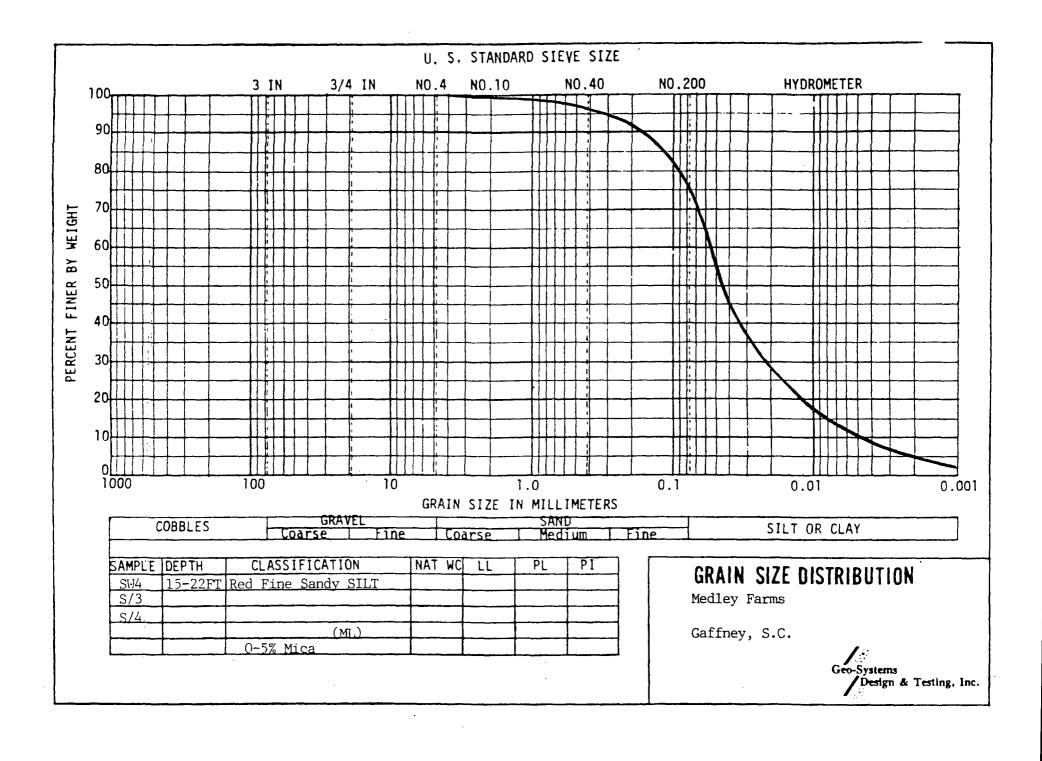


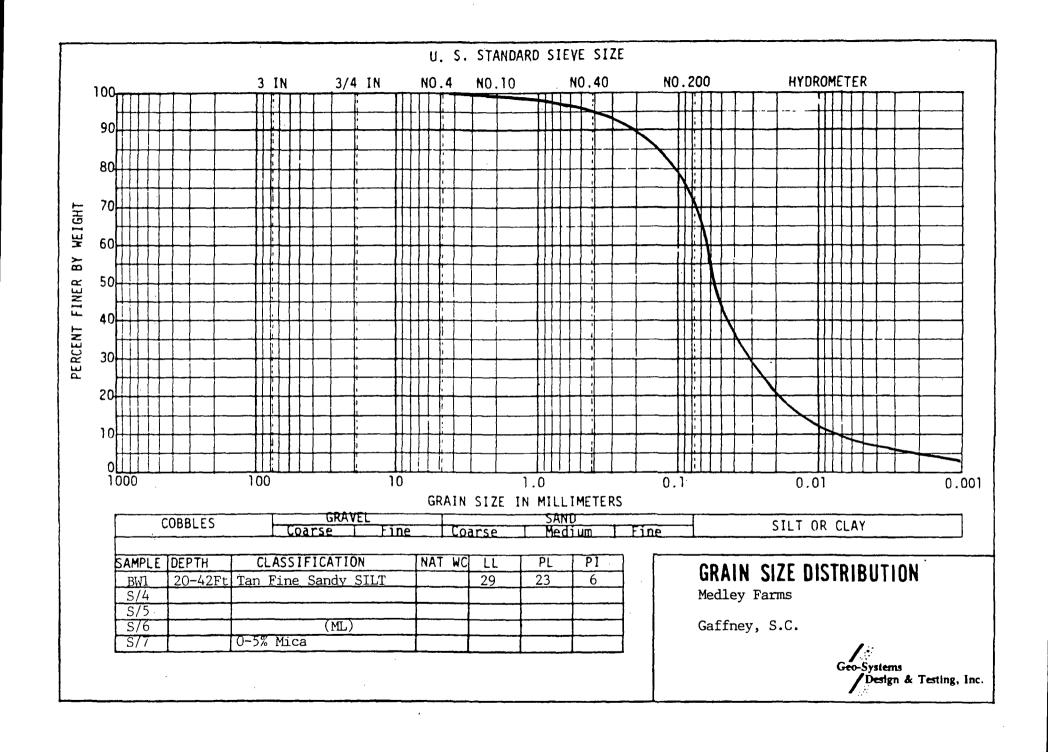


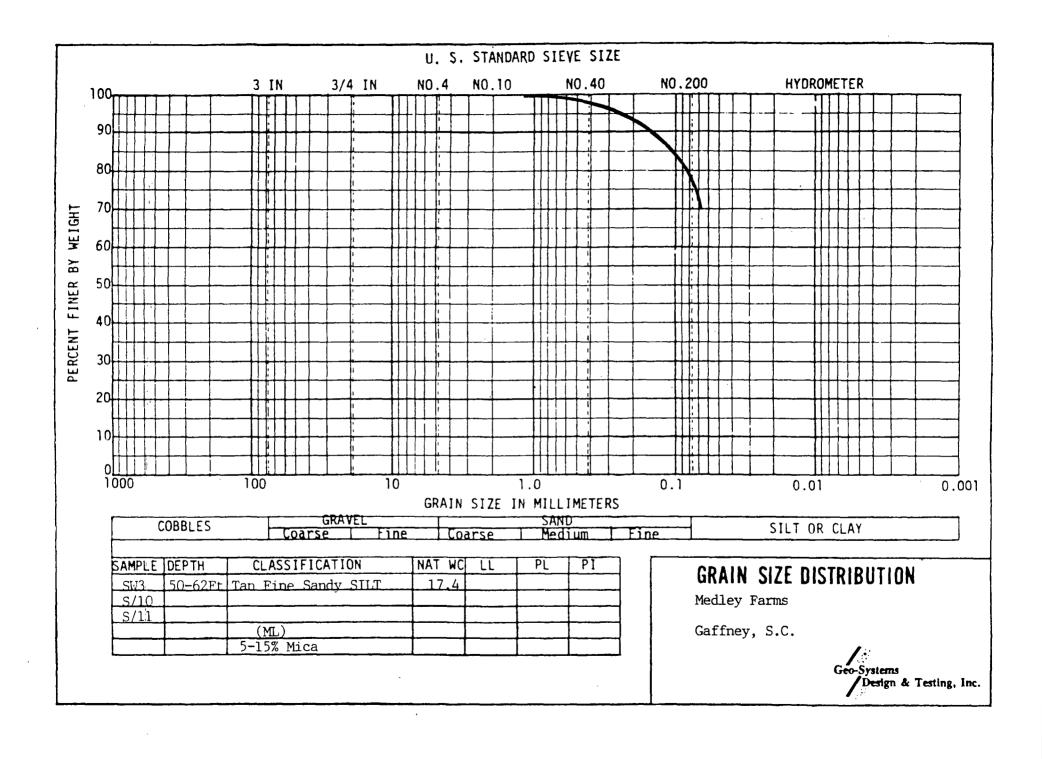


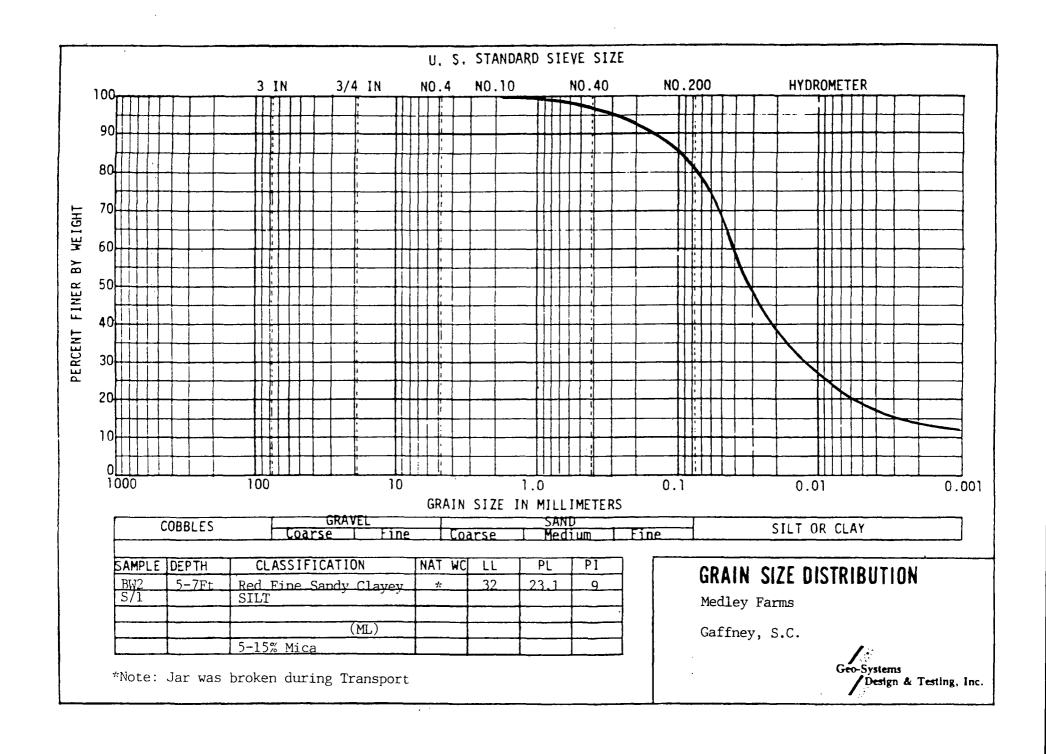


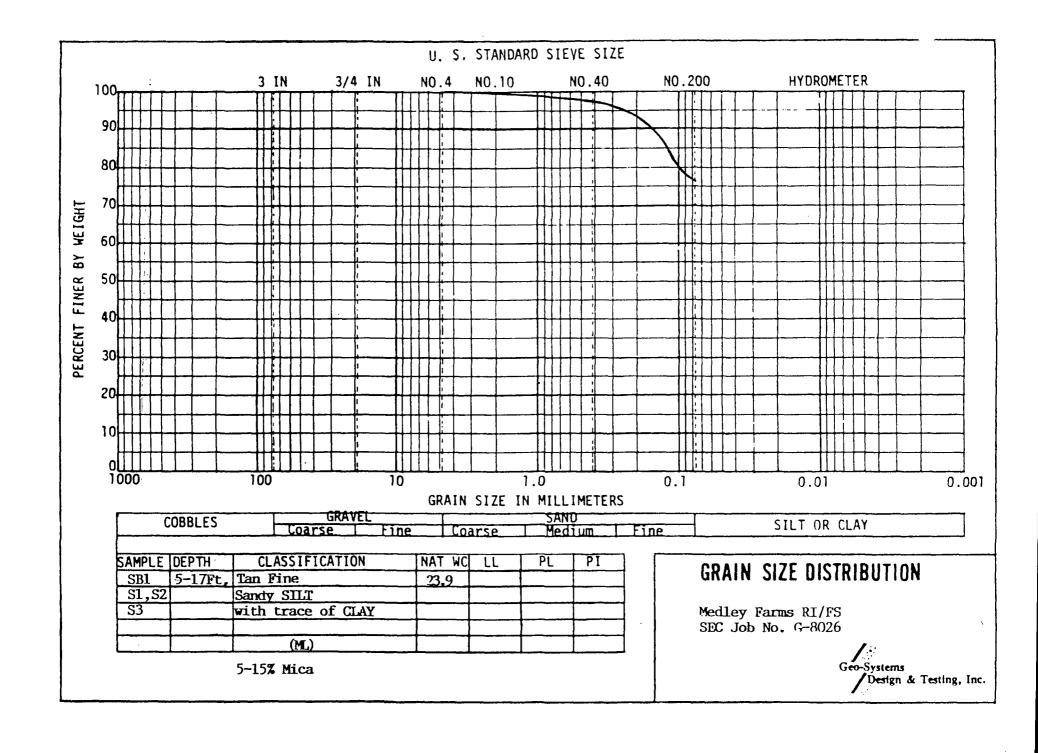


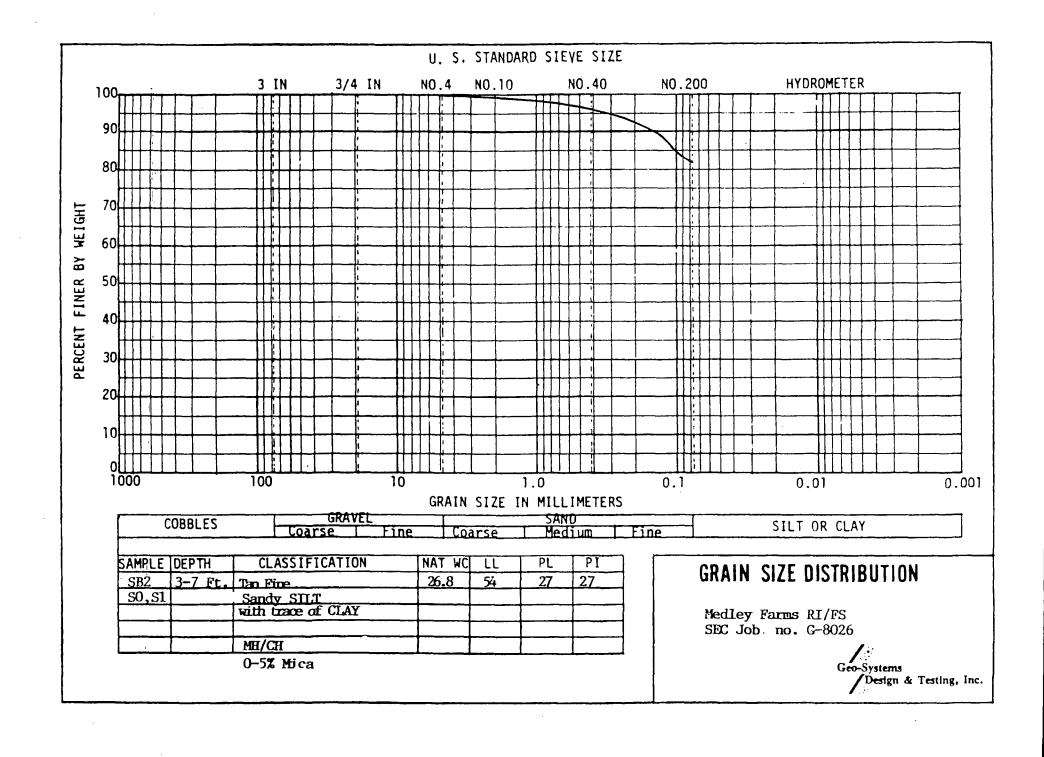


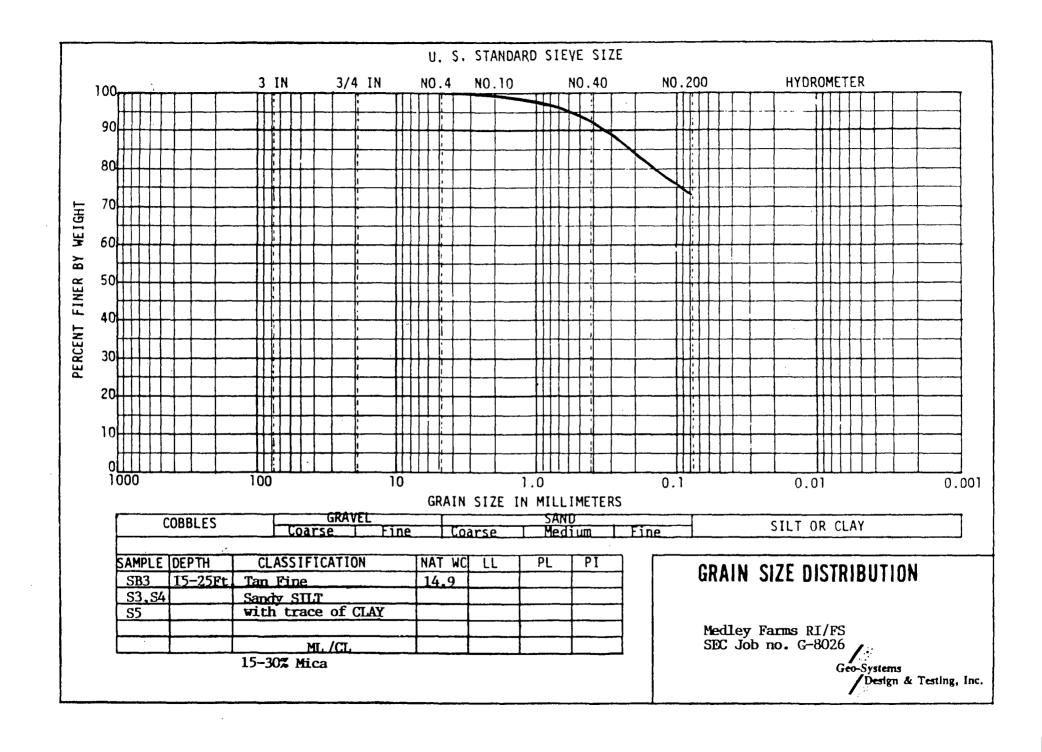


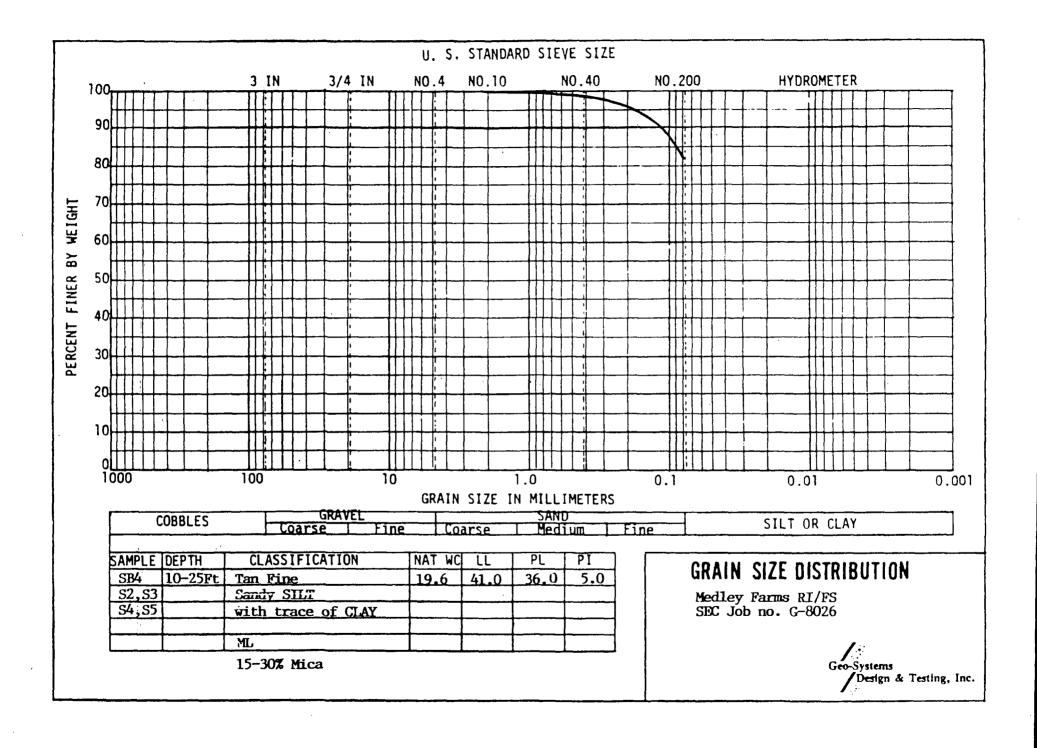


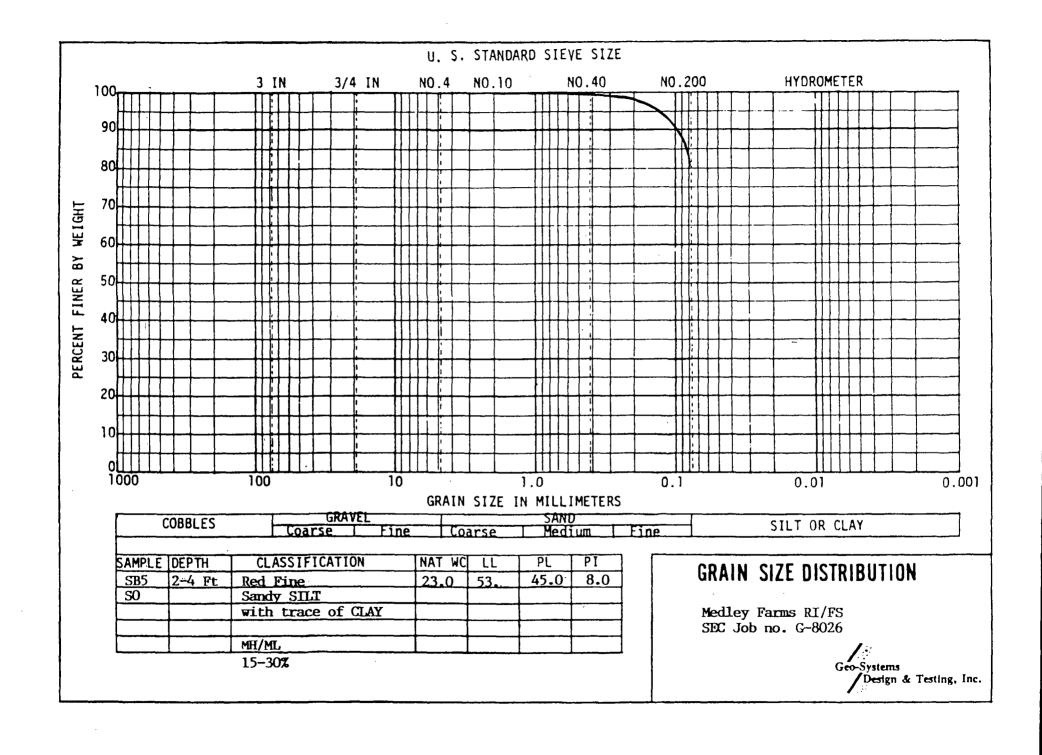


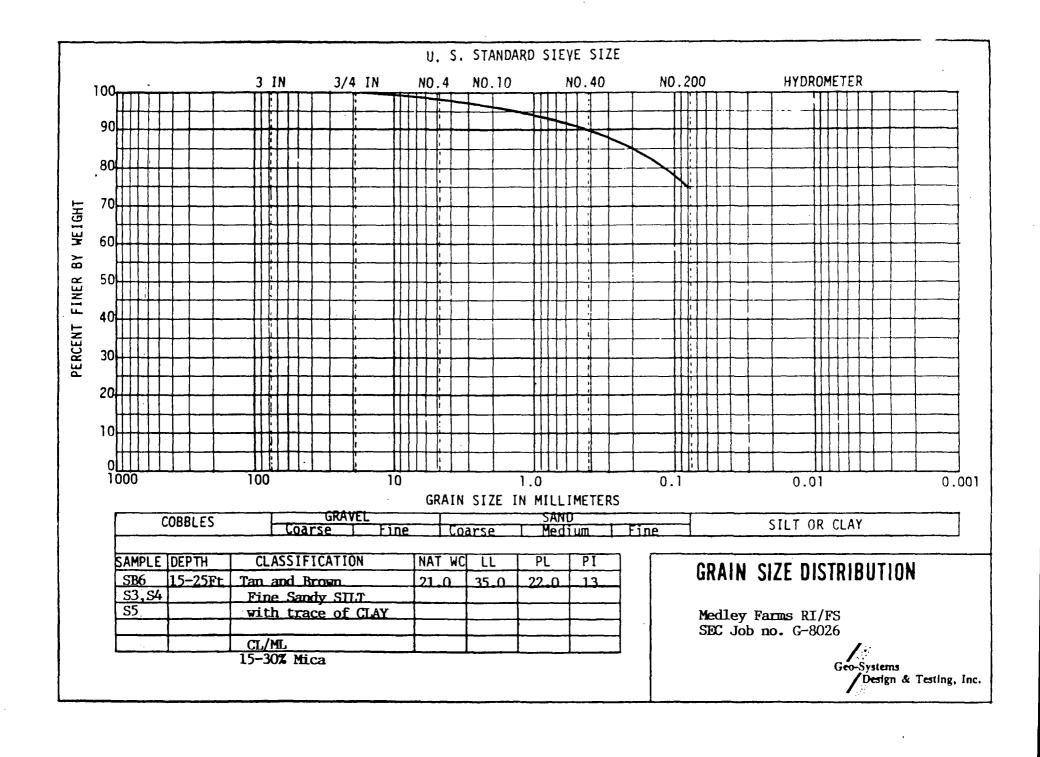


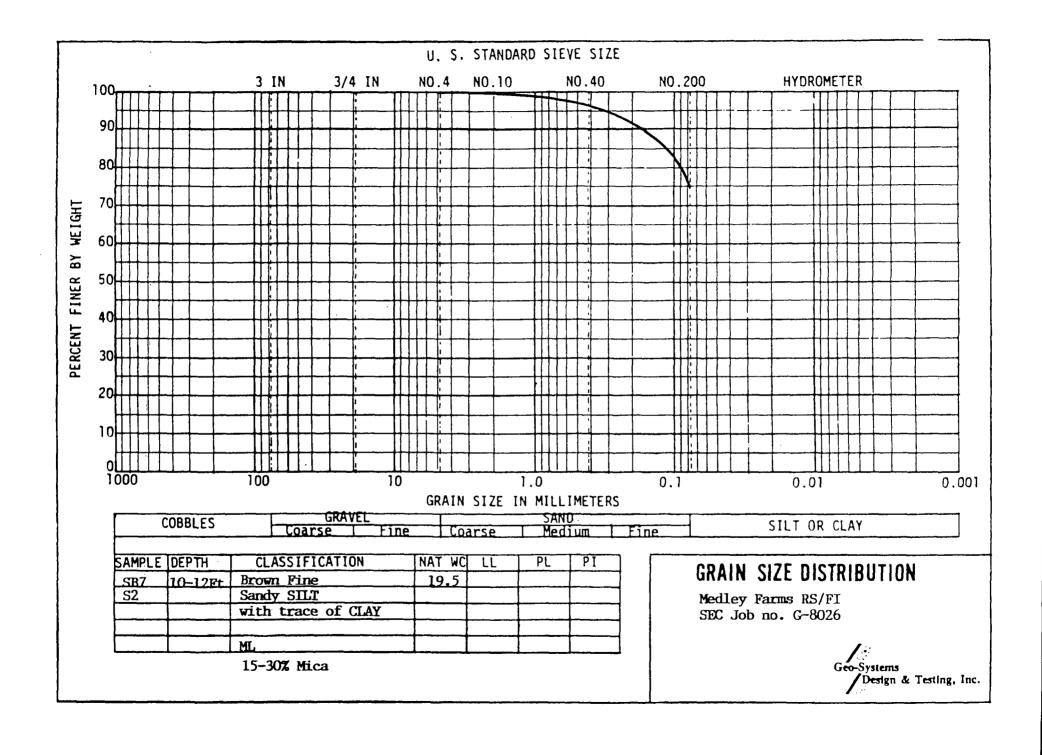


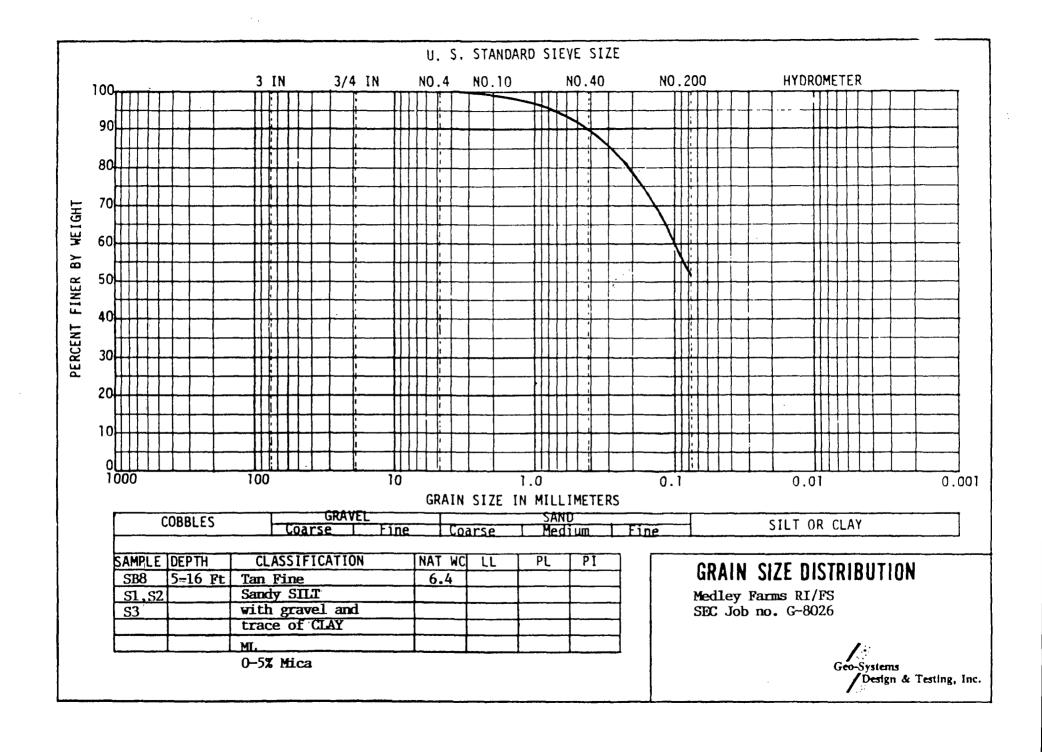


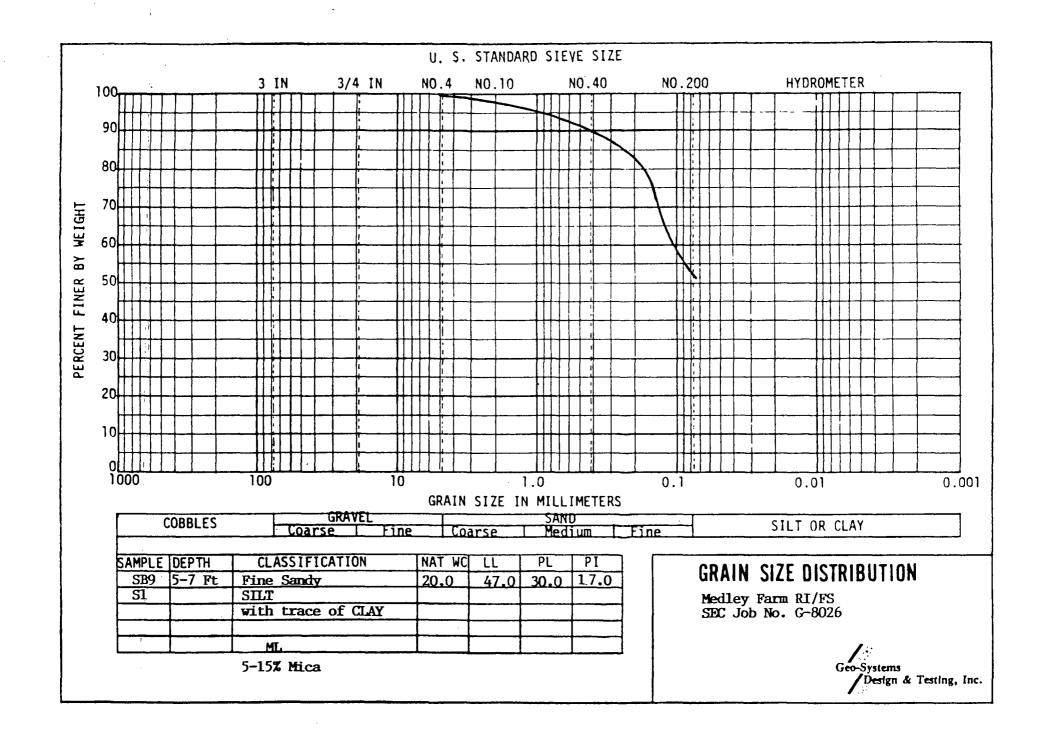


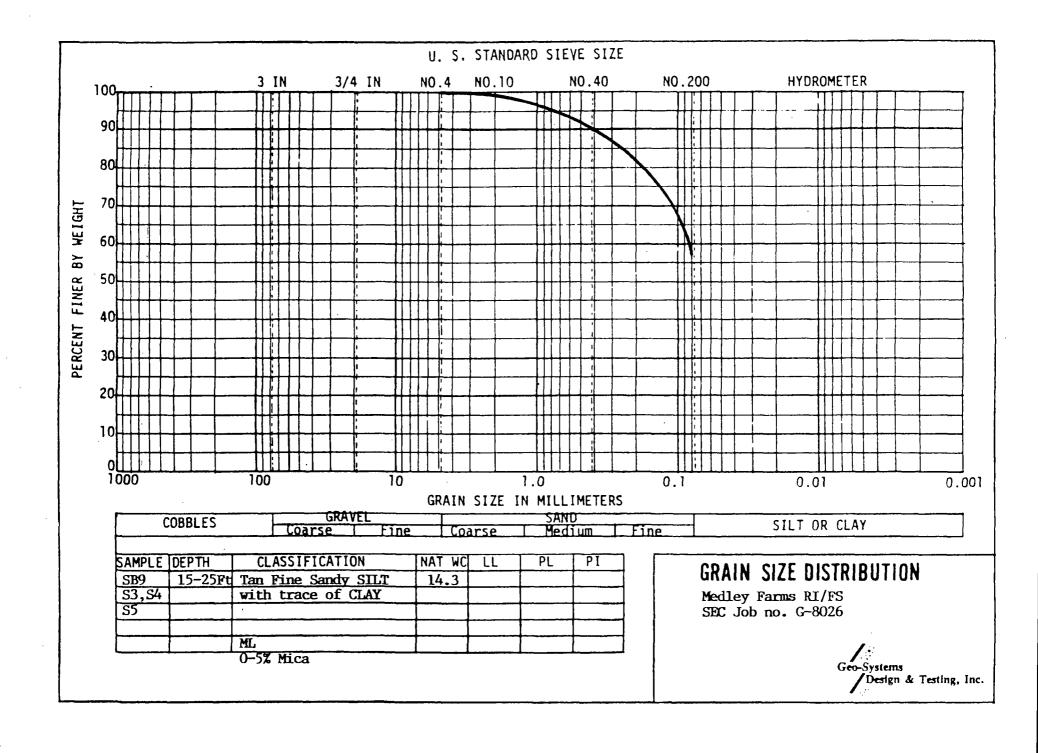


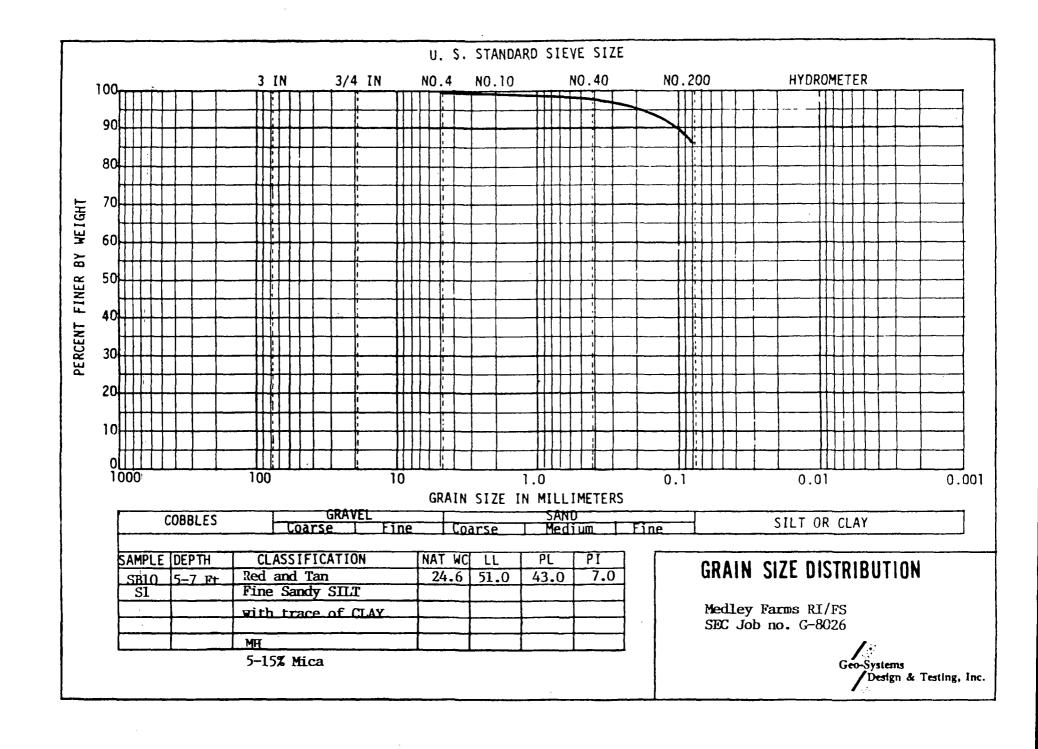


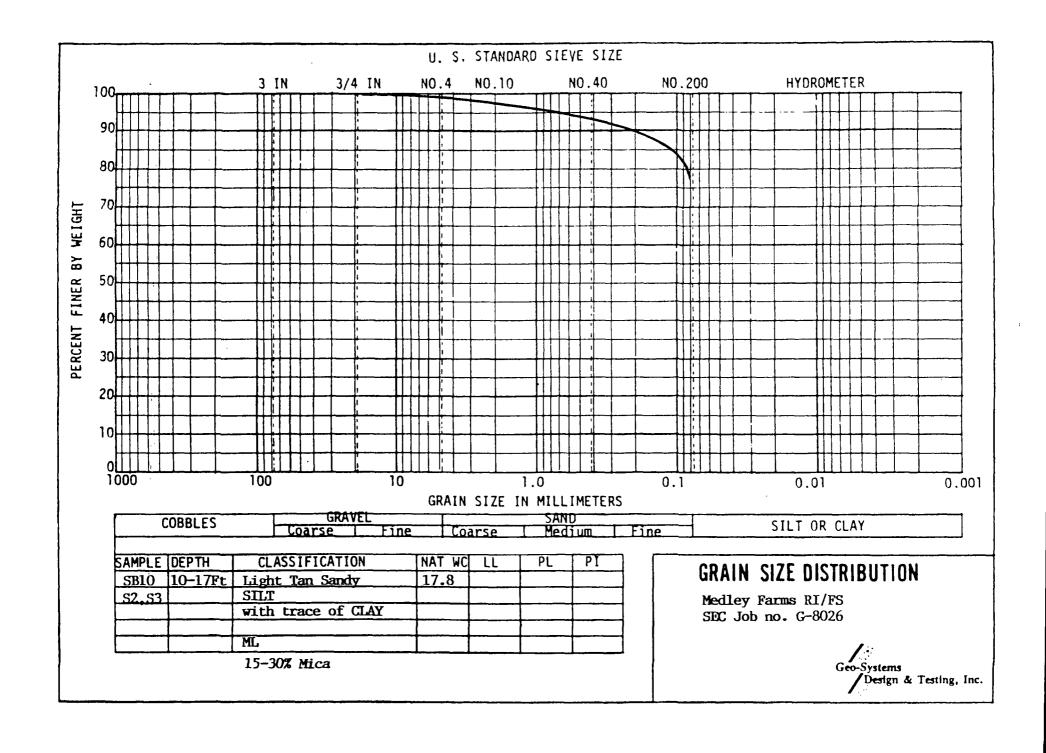








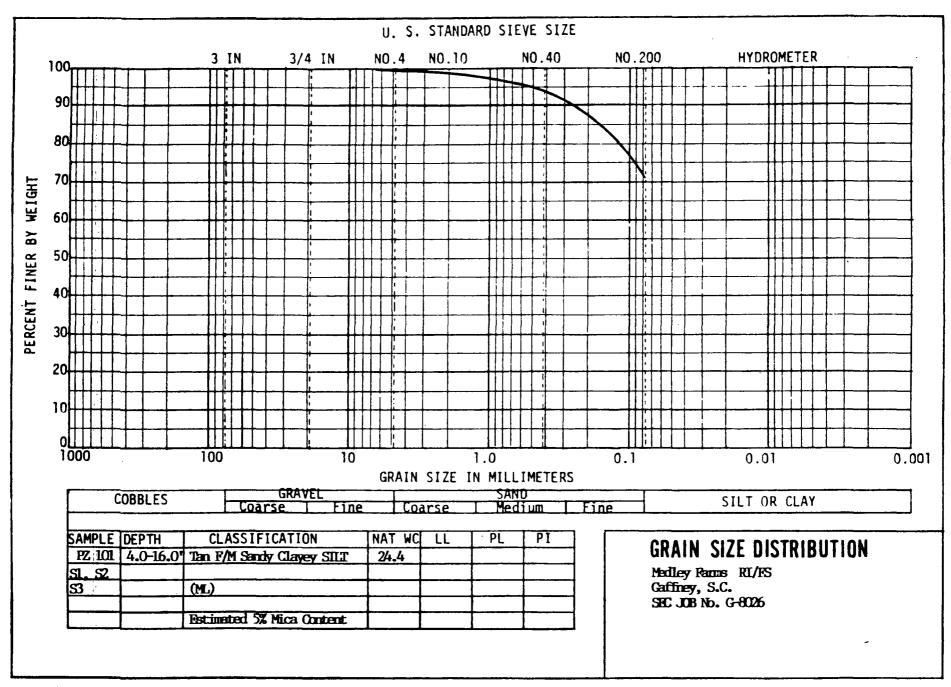


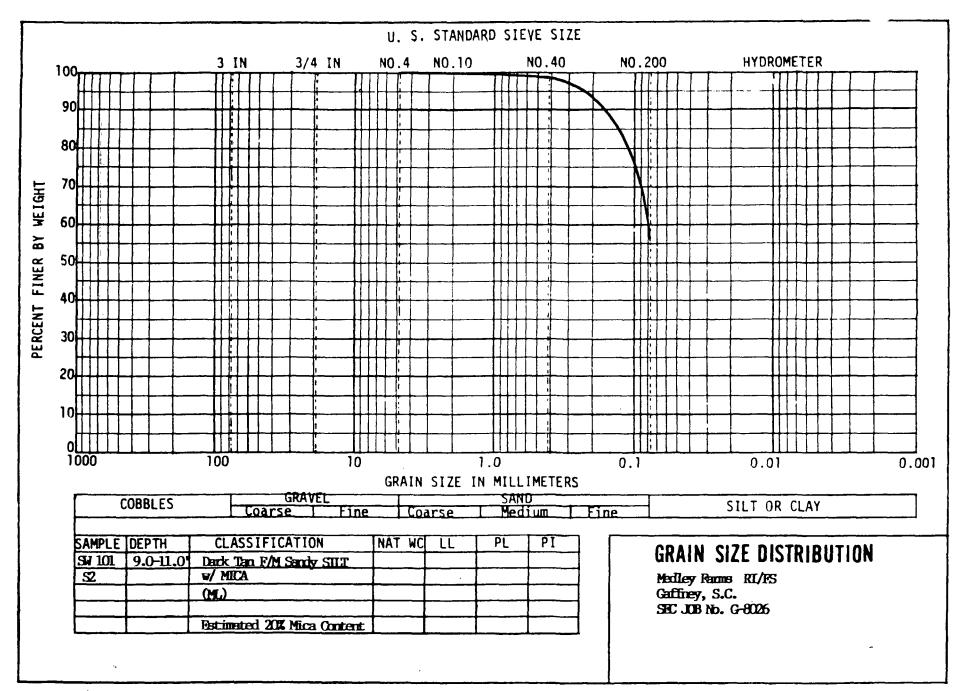


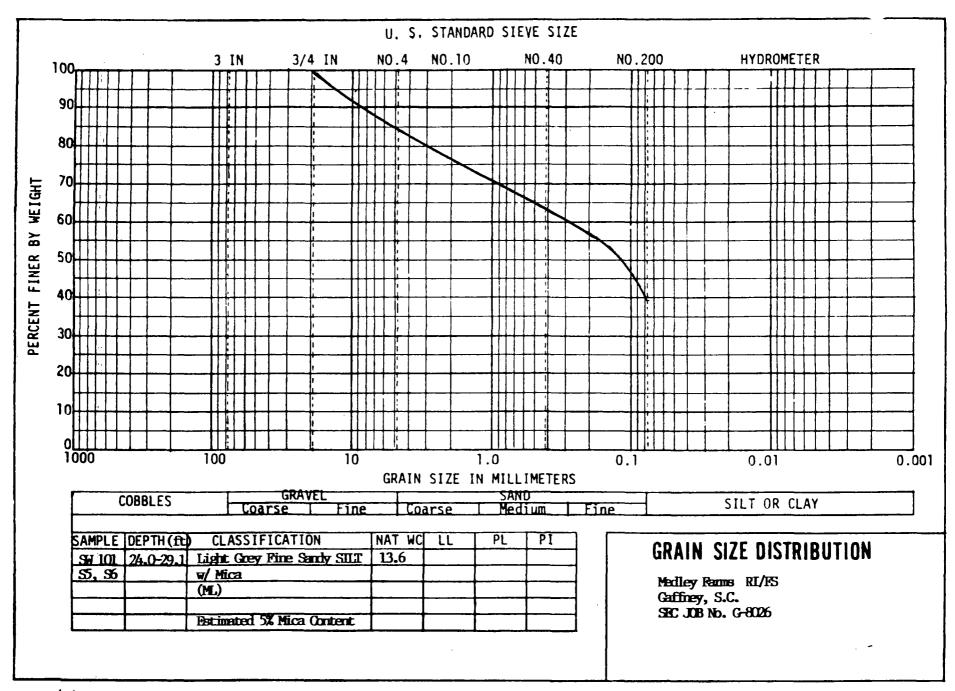
GEOTECHNICAL SOIL ANALYSIS MEDLEY FARM RI/FS SEC JOB NO. G-8026

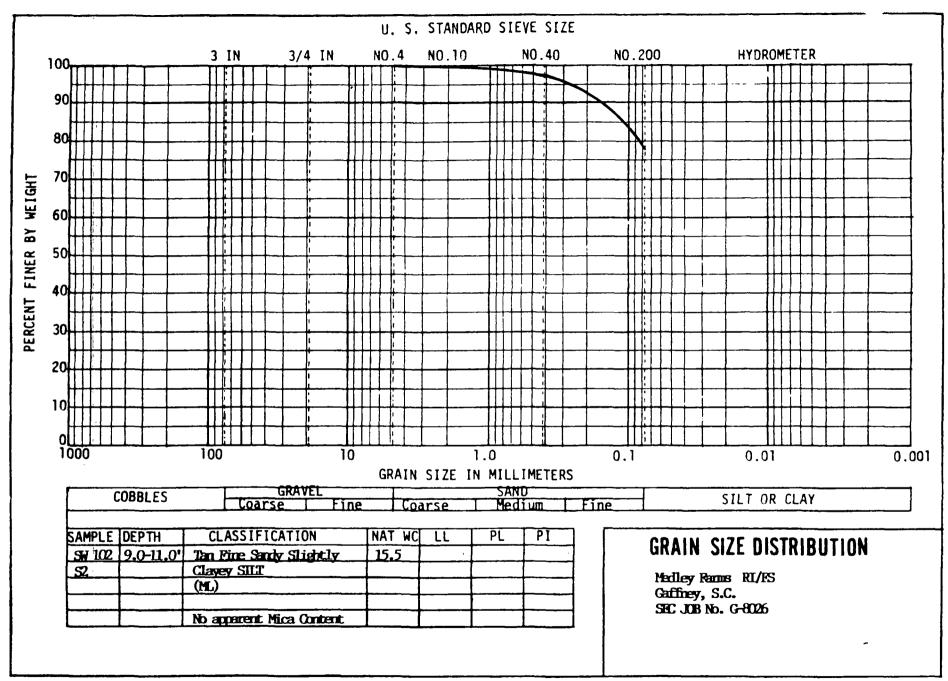
Exploration Number	Sample Number(s)	Sample Depth (ft)	Washed Sieve Ana.	Natural Moisture Content	Atterberg Limits	Total Organic Carbon
PZ101	S1, S2, S3	4-16	**	24.4		469 mg/kg
SW101	S5, S6	24-29.1	**			
SW101	S2	9.0-11.0	**	13.6		447 mg/kg
SW102	S2	9.0-11.0	**	15.5		484 mg/kg
SW102	S8, S9, S10	39.0-48.0	**			
SW103	S1	4.0-5.5	**	20.3	**	
SW103	S8, S9	39.0-45.0	**			
SW104	S2	9.0-11.0	**	14.3		
SW106	S4, S5	19.0-26.0	**			
SW108	S1	3.5-5.5	**	14.0	**	
SW108	S3, S4	13.5-20.0	**	•		
SW109	S2, S3	9.0-16.0	**	21.7	**	203 mg/kg
SW109	S6, S7, S8	29.0-39.5	**	13.2		
SW109 S	S12, S13, S14	59.0-69.0	**			
SW110	S5, S6	23.5-30.5	**	15.3		

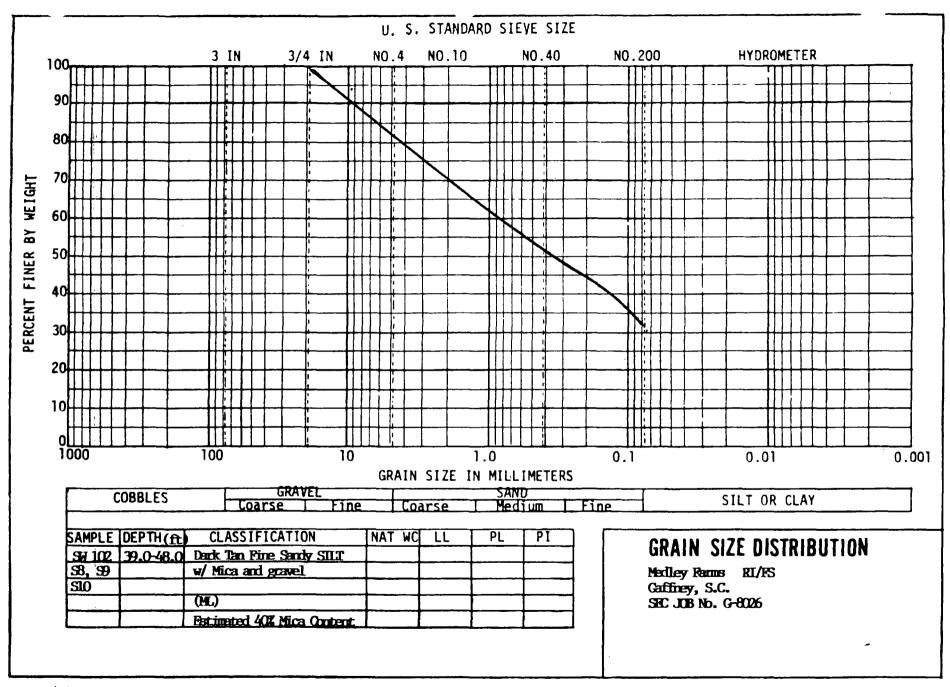
^{**}SEE ATTACHED GRAIN SIZE DISTRIBUTION SHEETS FOR SOIL DESCRIPTIONS, GRAIN SIZE ANALYSIS, ATTERBERG LIMITS, AND ESTIMATED MICA CONTENTS.



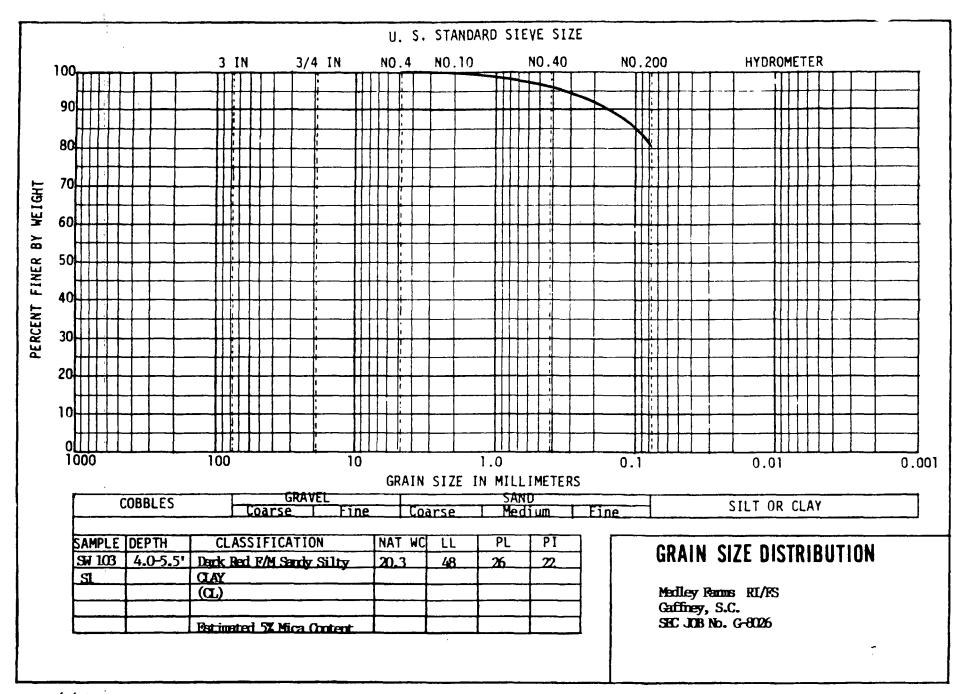


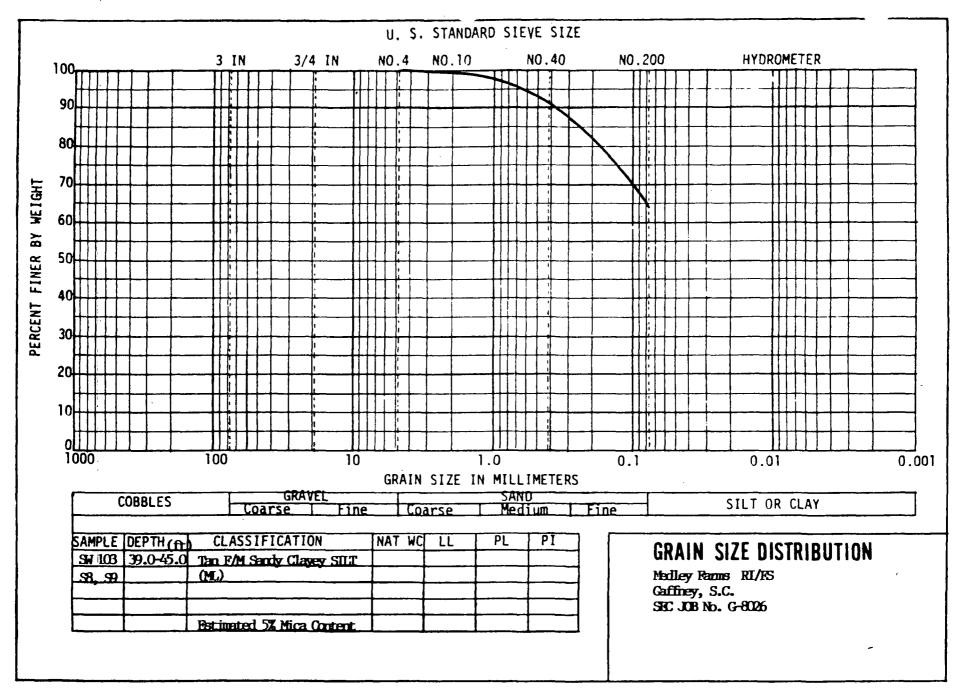


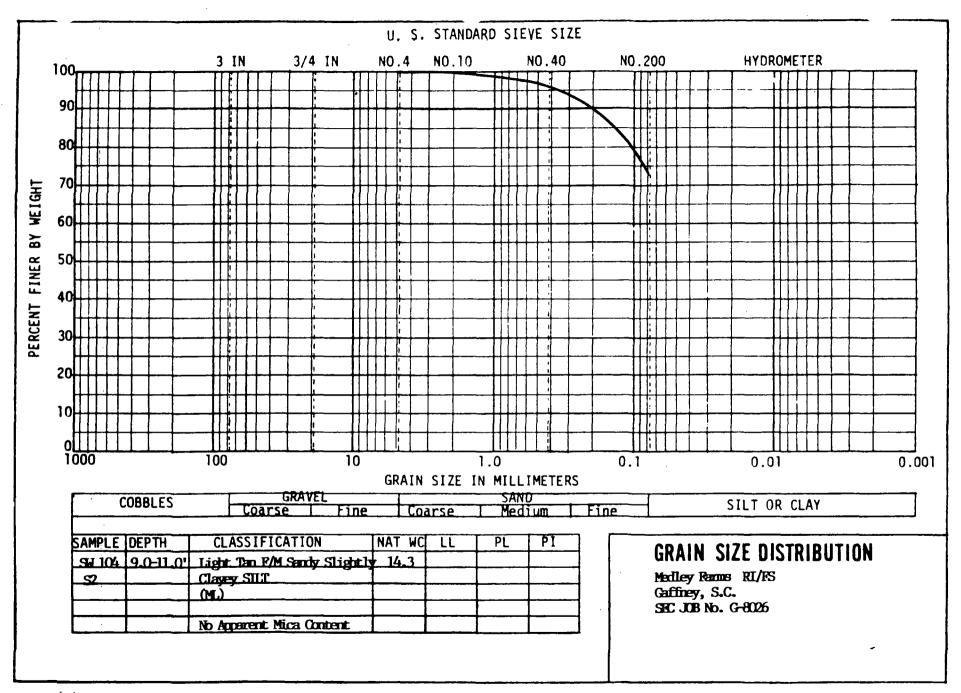


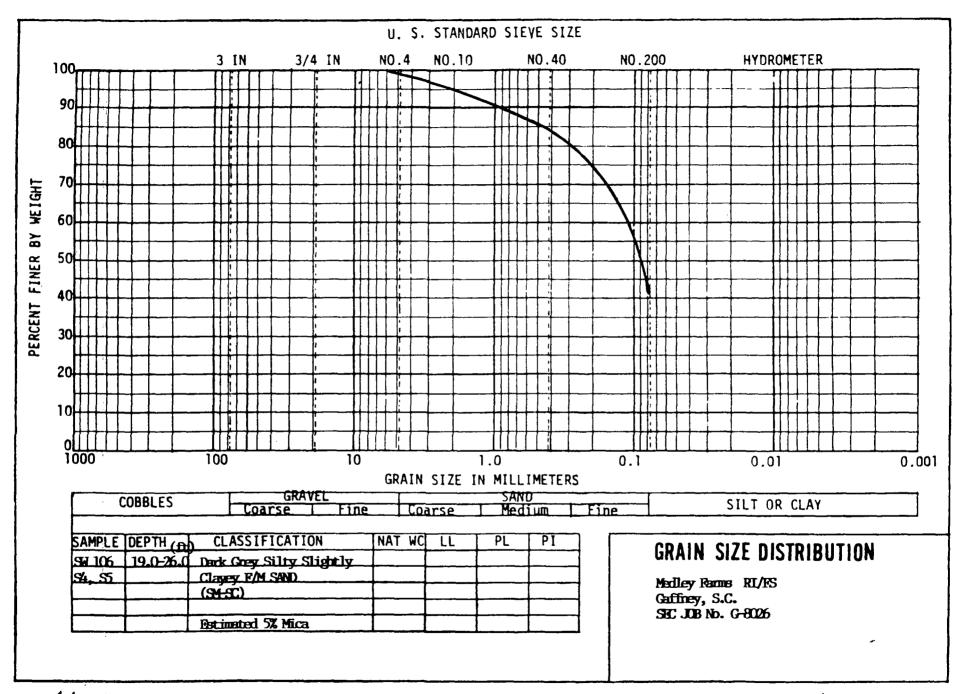




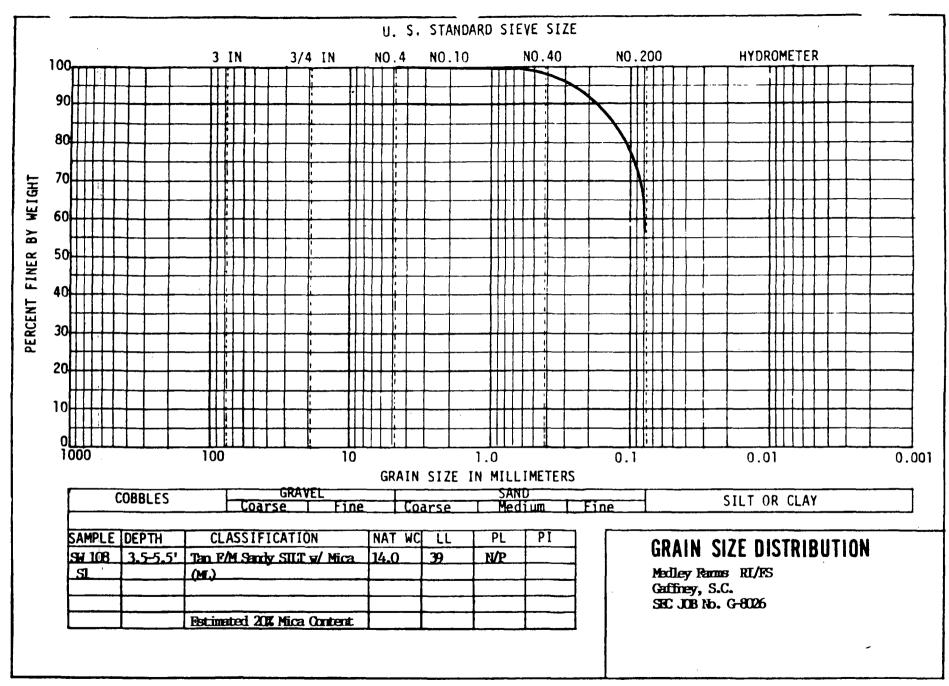


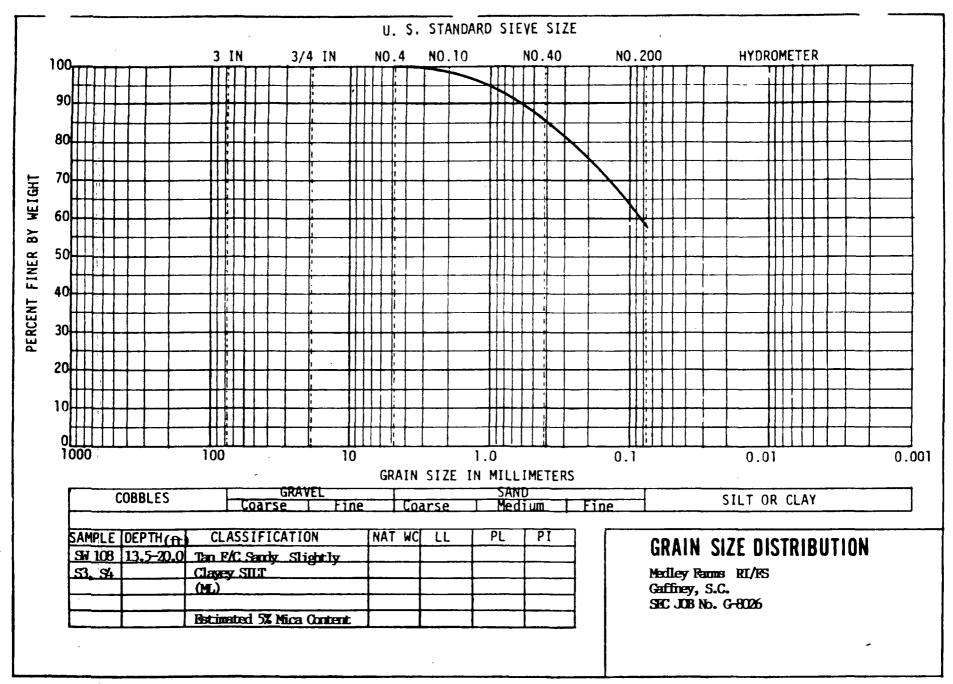




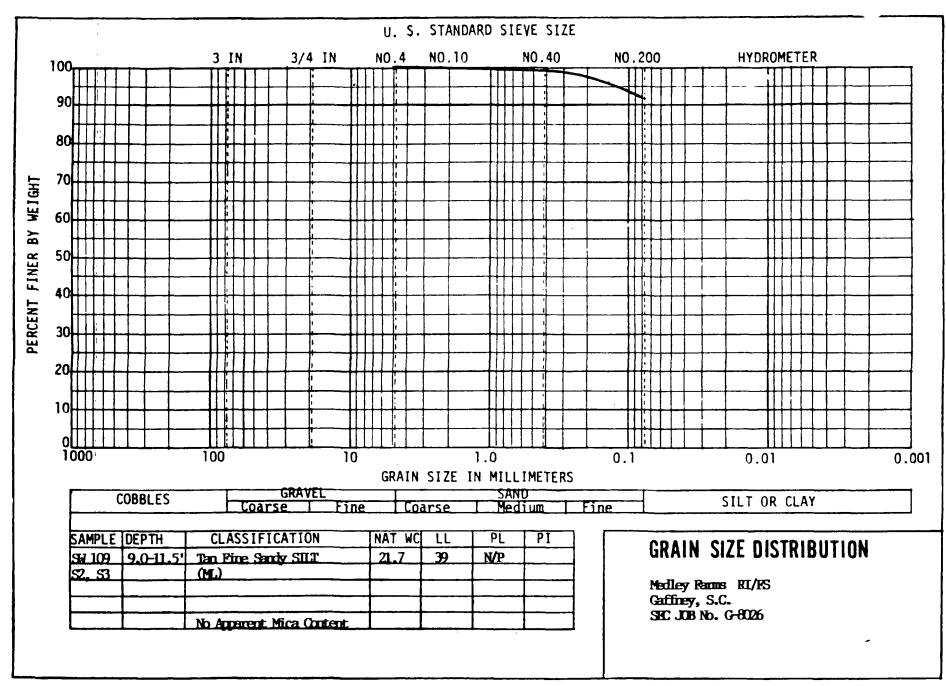




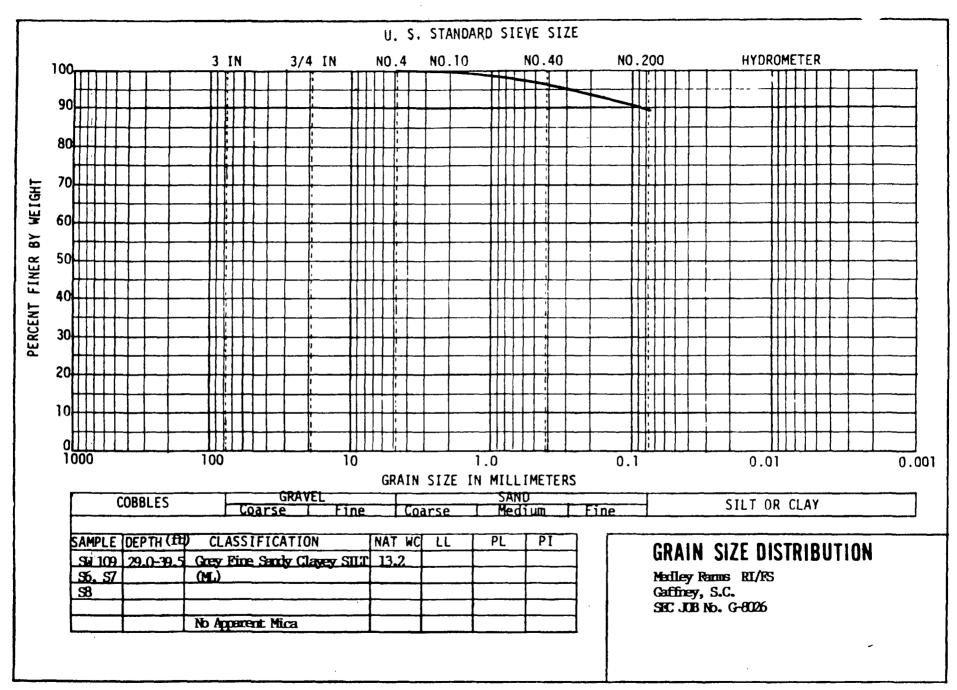


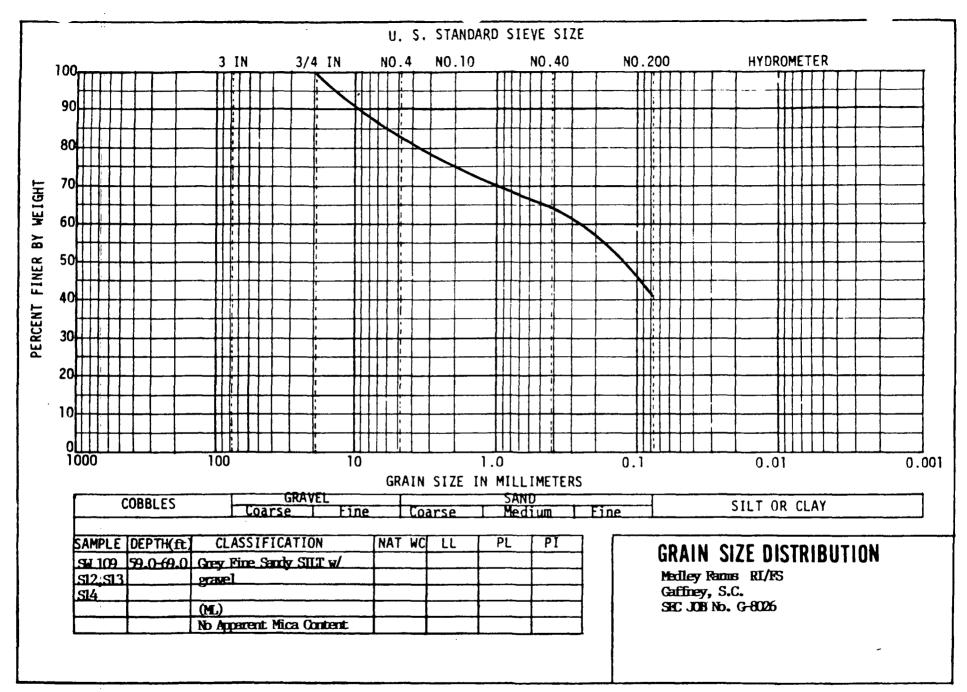


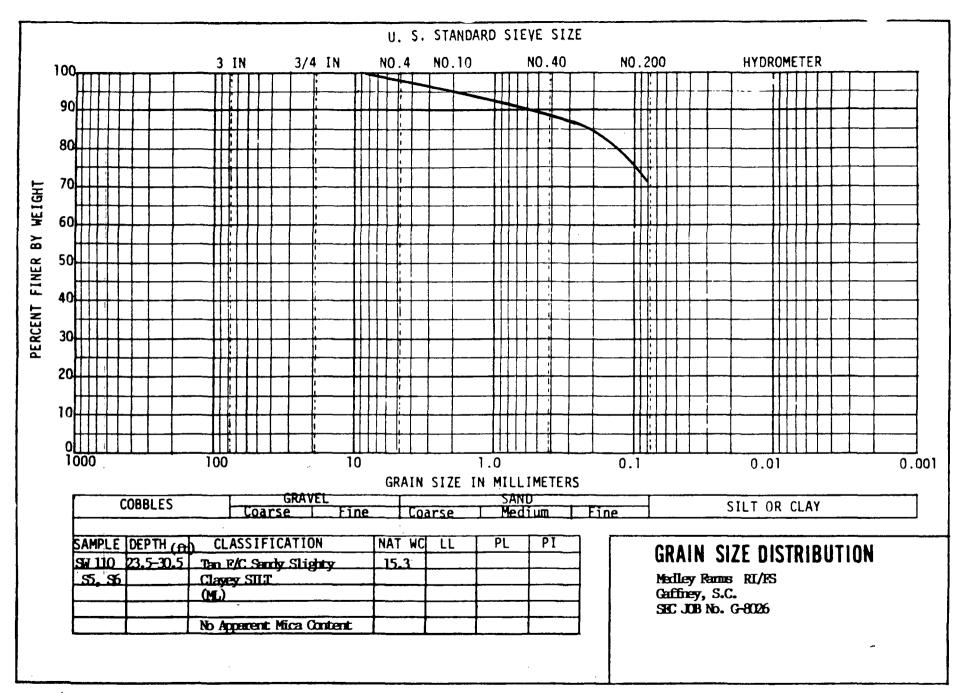




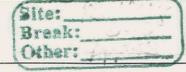




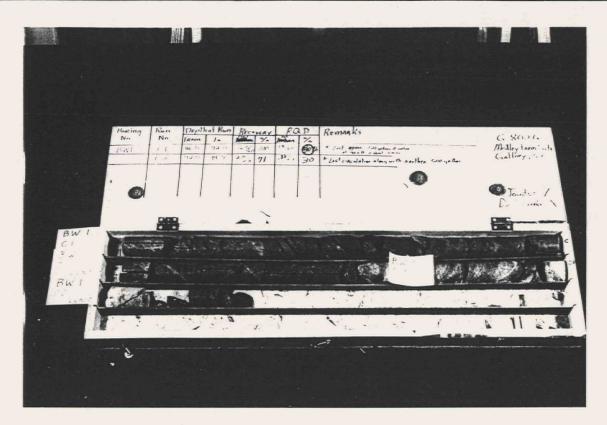




APPENDIX K
ROCK CORE PHOTOGRAPHY







Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI

LOCATION: Gaffney, South Carolina

CLIENT: Medley Farm Steering Committee

CONTRACTOR: Environmental Drilling and Services for Phase I

Atlanta Testing and Engineering for Phase II

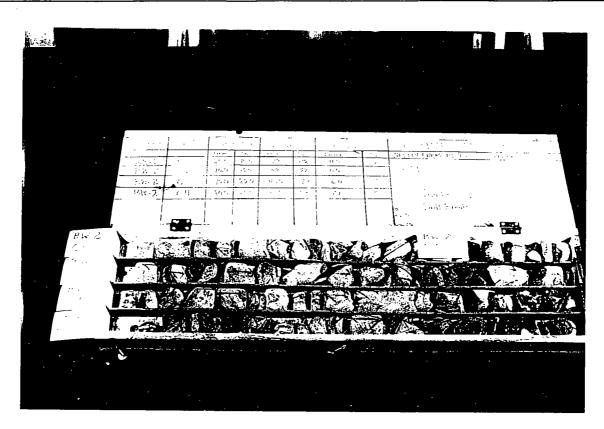
JOB NO.: G-8026

DATE CORED: 6/1-14/90

PHOTOGRAPHED BY: E. Olson

		DEPTH O	F RUN (FT.)	T.) RECOVERY		RQD	
BORING NO.	RUN NO.	FROM:	TO:	INCHES	%	INCHES	%
BW 1	C1 C2	86 92	92 94.8	72 24	100 71	21.6 0	30 0
	Α						





Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI

LOCATION: Gaffney, South Carolina

CLIENT: Medley Farm Steering Committee

CONTRACTOR: Environmental Drilling and Services for Phase I

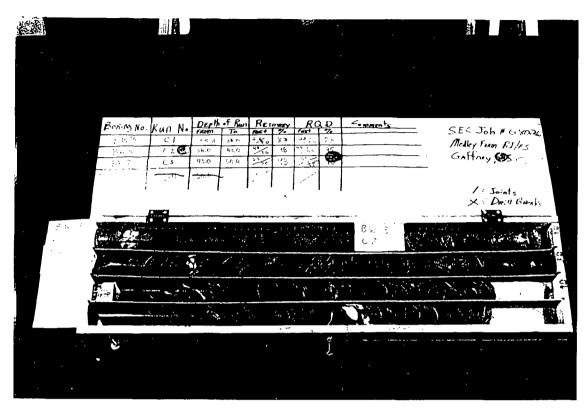
Atlanta Testing and Engineering for Phase II

JOB NO.: <u>G-8026</u>

PHOTOGRAPHED BY: E. Olson

BORING NO. RUN NO. FROM: TO: INCHES % INCHES % BW 2 C1 65 70 28.8 48 4.5 1 C2 70 75 99.2 82 4.0 1 C3 75 80 43.2 73 6.0 1 C4 80 85 31.2 53 0 0	 							
BW 2 C1 65 70 28.8 48 4.5 1 C2 70 75 99.2 82 4.0 1 C3 75 80 43.2 73 6.0 1			DEPTH O	DEPTH OF RUN (FT.)		VERY	RO	סג
C2 70 75 99.2 82 4.0 1 C3 75 80 43.2 73 6.0 1	BORING NO.	RUN NO.	FROM:	TO:	INCHES	%	INCHES	%
	BW 2	C2 C3	70 75	75 80	99.2 43.2	82 73	4.0 6.0	1 1 1 0





Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI

LOCATION: Gaffney, South Carolina

CLIENT: Medley Farm Steering Committee

CONTRACTOR: Environmental Drilling and Services for Phase I

Atlanta Testing and Engineering for Phase II

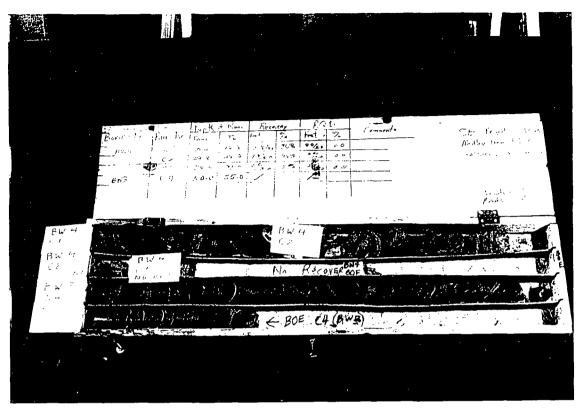
JOB NO.: <u>G-8026</u>

DATE CORED: 7/14-21/90

PHOTOGRAPHED BY: E. Olson

		DEPTH OF RUN (FT.) RECOVERY		RO	D		
BORING NO.	RUN NO.	FROM:	TO:	INCHES	%	INCHES	%
BW 3	C1 C2 C3	35 38 43	38 43 50	30 58.8 78	83 98 93	21.9 55.86 78	73 95 93





Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI

LOCATION: Gaffney, South Carolina

CLIENT: Medley Farm Steering Committee

CONTRACTOR: Environmental Drilling and Services for Phase I

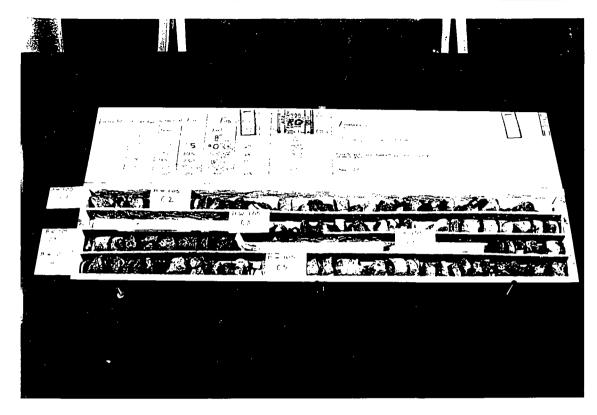
Atlanta Testing and Engineering for Phase II

JOB NO.: <u>G-8026</u>

PHOTOGRAPHED BY: E. Olson

<u> </u>		DEPTH O	DEPTH OF RUN (FT.)		VERY	RQD	
BORING NO.	RUN NO.	FROM:	TO:	INCHES	%	INCHES	%
BW 4 	C1 C2 — — C3 C4 —	18 22.8 27.9 50	22.8 27.9 31	21.6 21.6 — 0 — 58.8	36 36 0 98	0 0 0 0 58.8	0 0 0 98
BW 3				00,0	,	00.0	
-							
	;						
							ł





Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI

LOCATION: ____ Gaffney, South Carolina

CLIENT: Medley Farm Steering Committee

CONTRACTOR: Environmental Drilling and Services for Phase I

Atlanta Testing and Engineering for Phase II

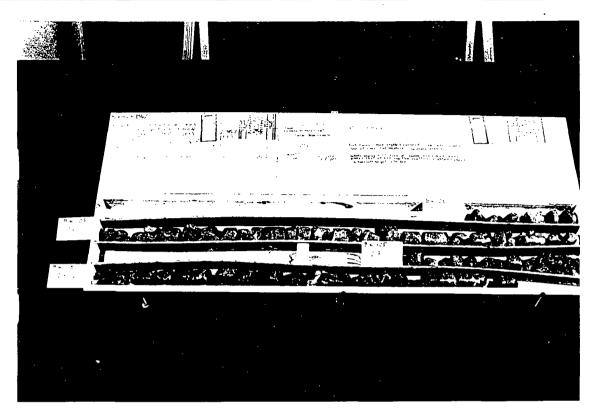
JOB NO.: G-8026

DATE CORED: 9/14-17/90

PHOTOGRAPHED BY: E. Olson

	T	T		1		7	
	ļ	DEPTH OF RUN (FT.)		RECOVERY		RQD	
BORING NO.	RUN NO.	FROM:	TO:	INCHES	%	INCHES	%
BW 105	C1	89	90	8	67	0	0
	C2	90	95	40	67	0	0
	C3	95	101.5	53	68	0	0
	C4	101.5	106.3	34	59	0	0
	C5	106.3	110.2	35	75	0	0





Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI

LOCATION: Gaffney, South Carolina

CLIENT: Medley Farm Steering Committee

CONTRACTOR: Environmental Drilling and Services for Phase I

Atlanta Testing and Engineering for Phase II

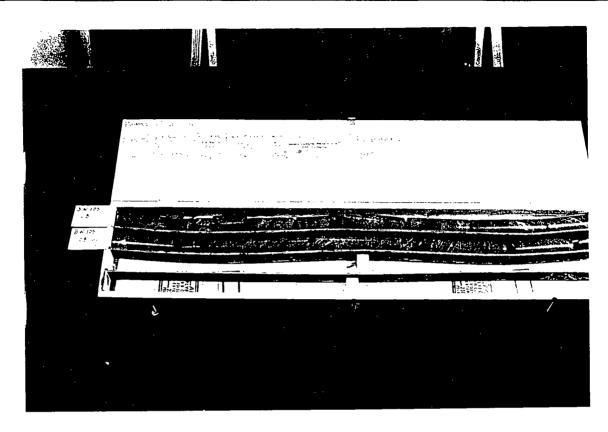
JOB NO.: <u>G-8026</u>

DATE CORED: 9/14-17/90

PHOTOGRAPHED BY: E. Olson

OOTIC DATIFIED							
		DEPTH O	F RUN (FT.)	RECO	VERY	RQD	
BORING NO.	RUN NO.	FROM:	TO:	INCHES	%	INCHES	%
BW 105	C6 C7	110.3 120.37	120.37 129.5	72 60	60 55	0	0





Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI

LOCATION: Gaffney, South Carolina

CLIENT: Medley Farm Steering Committee

CONTRACTOR: Environmental Drilling and Services for Phase I

Atlanta Testing and Engineering for Phase II

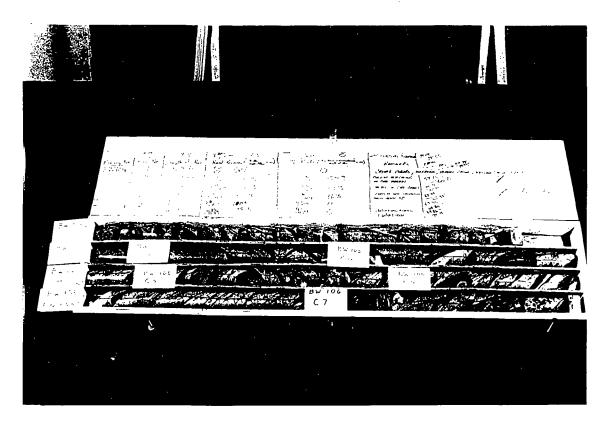
JOB NO.: G-8026

DATE CORED: 9/14-17/90

PHOTOGRAPHED BY: E. Olson

		DEPTH O	DEPTH OF RUN (FT.)		RECOVERY		D
BORING NO.	RUN NO.	FROM:	TO:	INCHES	%	INCHES	%
BW 105	C8	129.5	139.12	116.04	100	110.5	91
						į	





Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI

LOCATION: Gaffney, South Carolina

CLIENT: Medley Farm Steering Committee

CONTRACTOR: Environmental Drilling and Services for Phase I

Atlanta Testing and Engineering for Phase II

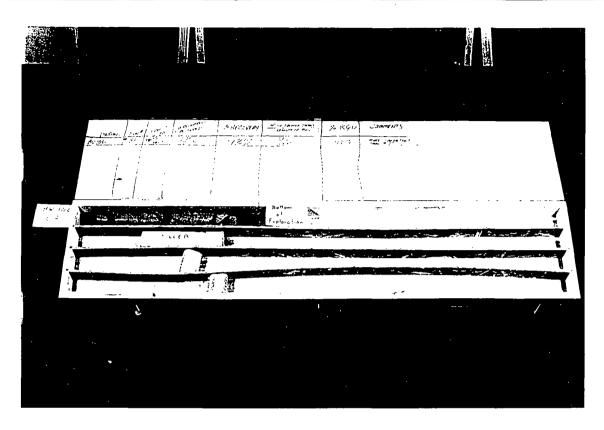
JOB NO.: <u>G-8026</u>

DATE CORED: 9/24-27/90

PHOTOGRAPHED BY: E. Olson

L								
		DEPTH OF RUN (FT.) RECOVERY		RC	סג			
BORING NO.	RUN NO.	FROM:	TO:	INCHES	%	INCHES	%	
BW 106	C1 C2 C3 C4 C5 C6 C7	54.75 59.75 60.75 62.45 67.35 69.86 74.15	59.75 60.75 62.45 67.35 69.86 74.15 78.55	38.4 12 20.4 34.8 30.0 48 28.8	64 100 100 57 100 93 54	0 6 12 5.6 0 0	0 0 59 16 0 0	





Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI

LOCATION: Gaffney, South Carolina

CLIENT: Medley Farm Steering Committee

CONTRACTOR: Environmental Drilling and Services for Phase I

Atlanta Testing and Engineering for Phase II

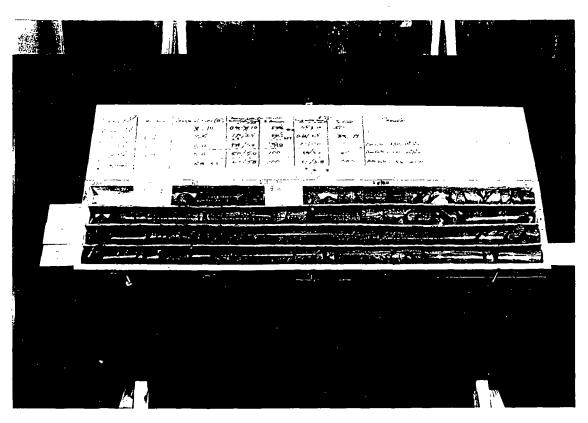
JOB NO.: <u>G-8026</u>

DATE CORED: <u>9/24-27/90</u>

PHOTOGRAPHED BY: E. Olson

		DEPTH OF RUN (FT.)		RECOVERY		RC	D	
BORING NO.	RUN NO.	FROM:	TO:	INCHES	%	INCHES	%	
BW 106	C8	78.55	80.60	22.8	93	11.2	49	





Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI

LOCATION: Gaffney, South Carolina

CLIENT: Medley Farm Steering Committee

CONTRACTOR: Environmental Drilling and Services for Phase I

Atlanta Testing and Engineering for Phase II

PHOTOGRAPHED BY: E. Olson

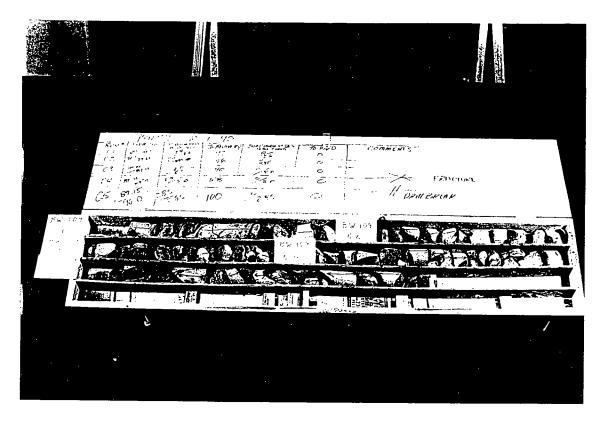
DATE CORED: 9/14, 17/90

G-8026

JOB NO.:

<u> </u>								
		DEPTH O	DEPTH OF RUN (FT.)		RECOVERY		D	
BORING NO.	RUN NO.	FROM:	TO:	INCHES	%	INCHES	%	
BW 108	C1 C2 C3 C4 C5	73.8 74.8 78.3 83.3 88.3	74.89 78.3 83.3 88.3 93.6	10.8 34.8 59.3 60 63.9	90 82.9 42 100 100	5.4 6.6 24.9 36 37.2	50 19 42 60 58.5	
	C5	88.3	93.6	63.9	100	37.2	58.5	
							} }	





Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI

LOCATION: Gaffney, South Carolina

CLIENT: Medley Farm Steering Committee

CONTRACTOR: Environmental Drilling and Services for Phase I

Atlanta Testing and Engineering for Phase II

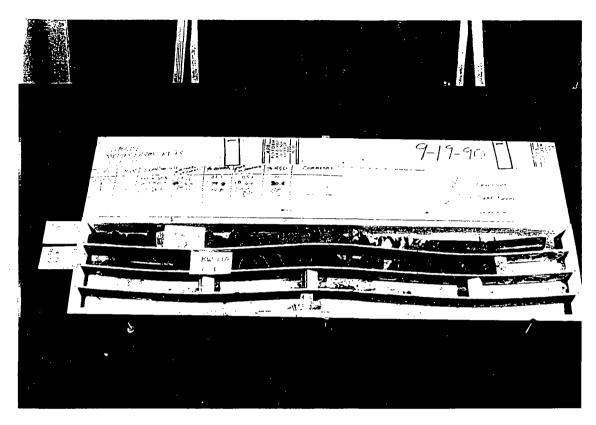
JOB NO.: G-8026

DATE CORED: ___10/11/90

PHOTOGRAPHED BY: E. Olson

							
		DEPTH O	F RUN (FT.)	RECO	VERY	RC	D
BORING NO.	RUN NO.	FROM:	TO:	INCHES	%	INCHES	%
BW 109	C1 C2 C3 C4 C5	69.5 72.1 77.05 82.15 87.15	72.1 77.05 82.15 87.15 90.0	28.8 28.8 24.0 34.8 24.0	92 48 40 58 70	0 0 0 0	0 0 0





Note: All core oriented top (right) to bottom (left).

PROJECT: _____ Medley Farm RI

LOCATION: Gaffney, South Carolina

CLIENT: Medley Farm Steering Committee

CONTRACTOR: Environmental Drilling and Services for Phase I

Atlanta Testing and Engineering for Phase II

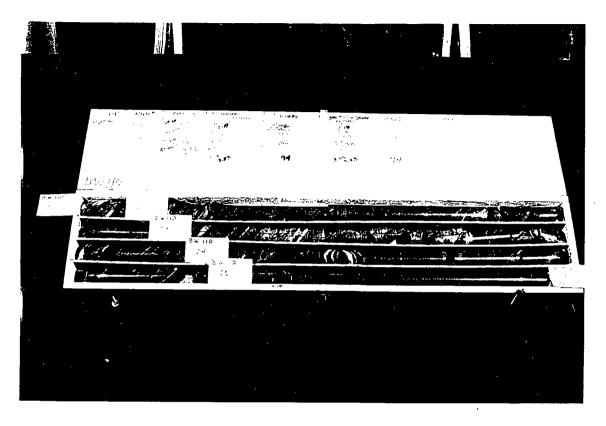
JOB NO.: <u>G-8026</u>

DATE CORED: 9/11-13/90

PHOTOGRAPHED BY: E. Olson

		DEPTH OF RUN (FT.)		RECOVERY		RC	D
BORING NO.	RUN NO.	FROM:	TO:	INCHES	%	INCHES	%
BW 110	C1 C2 C3	59.1 60.8 65.7	60.8 65.7 68.2	9.6 57.6 28.4	47.1 99 94.8	0 17.6 12	0 30.6 40





Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI

LOCATION: ____ Gaffney, South Carolina

CLIENT: Medley Farm Steering Committee

CONTRACTOR: Environmental Drilling and Services for Phase I

Atlanta Testing and Engineering for Phase II

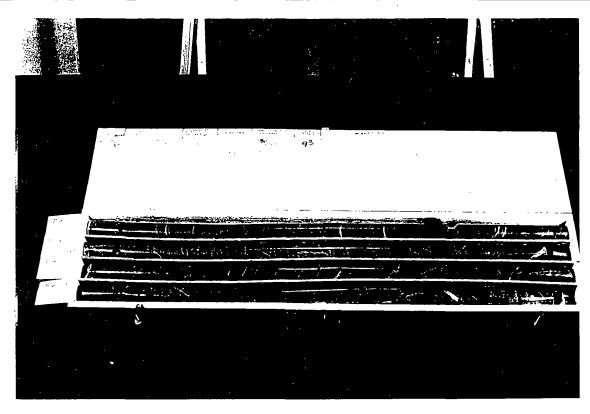
JOB NO.: <u>G-8026</u>

DATE CORED: ___9/2790

PHOTOGRAPHED BY: E. Olson

		DEPTH OF RUN (FT.)		RECOVERY		RQD	
BORING NO.	RUN NO.	FROM:	TO:	INCHES	%	INCHES	%
BW 110	C1 C2 C3 C4 C5	64.1 66.27 71.27 76.27 81.27	66.27 71.27 76.27 81.27 84.50	7.2 60 60 60 36.6	27 100 100 100 94	0 39.6 32.4 55.2 36.6	0 66 54 92 94





Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI

LOCATION: Gaffney, South Carolina

CLIENT: Medley Farm Steering Committee

CONTRACTOR: Environmental Drilling and Services for Phase I

Atlanta Testing and Engineering for Phase II

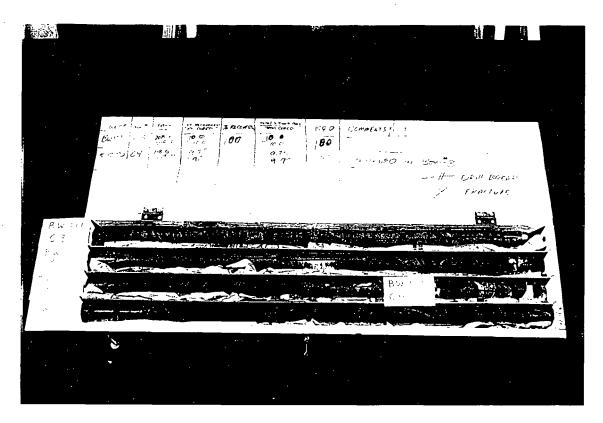
JOB NO.: G-8026

DATE CORED: 10/9/90

PHOTOGRAPHED BY: E. Olson

JOHE SAME							
		DEPTH OF RUN (FT.)		RECOVERY		RQD	
BORING NO.	RUN NO.	FROM:	TO:	INCHES	%	INCHES	%
BW 111	C1 C2	189 199	199 208.6	120 115.2	100 100	111.6 109.4	93 95





Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI

LOCATION: Gaffney, South Carolina

CLIENT: Medley Farm Steering Committee

CONTRACTOR: Environmental Drilling and Services for Phase I

Atlanta Testing and Engineering for Phase II

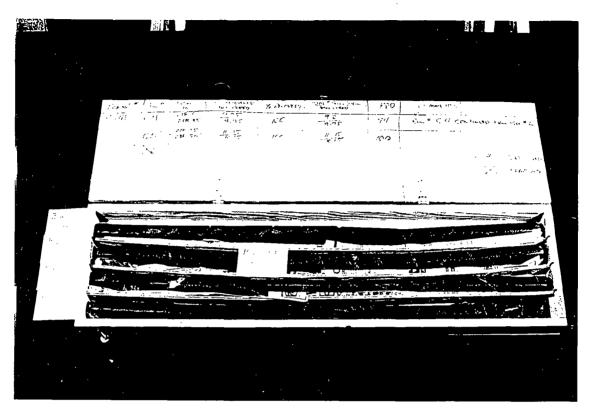
JOB NO.: <u>G-8026</u>

DATE CORED: ___10/7/90

PHOTOGRAPHED BY: E. Olson

	[DEPTH OF RUN (FT.)		RECOVERY		RQD	
BORING NO.	RUN NO.	FROM:	TO:	INCHES	%	INCHES	%	
BW 111	C3 C4	208.6 218.6	218.6 228.35	117 116.4	100 97	110 110.6	94 95	





Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI

LOCATION: Gaffney, South Carolina

CLIENT: __ Medley Farm Steering Committee

CONTRACTOR: Environmental Drilling and Services for Phase I

Atlanta Testing and Engineering for Phase II

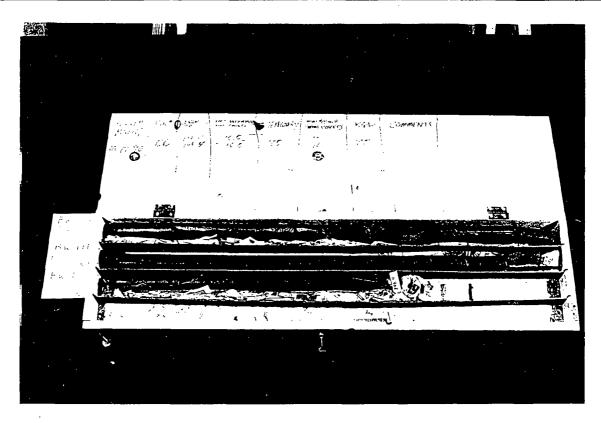
JOB NO.: G-8026

DATE CORED: _____

PHOTOGRAPHED BY: E. Olson

L							
		DEPTH OF	RUN (FT.)	RECO	VERY	RC	D
BORING NO.	RUN NO.	FROM:	TO:	INCHES	%	INCHES	%
BW 111	C4 C5	218.6 228.35	228.35 238.5	117 121.8	100 100	110 121.8	94 100





Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI

LOCATION: Gaffney, South Carolina

CLIENT: Medley Farm Steering Committee

CONTRACTOR: Environmental Drilling and Services for Phase I

Atlanta Testing and Engineering for Phase II

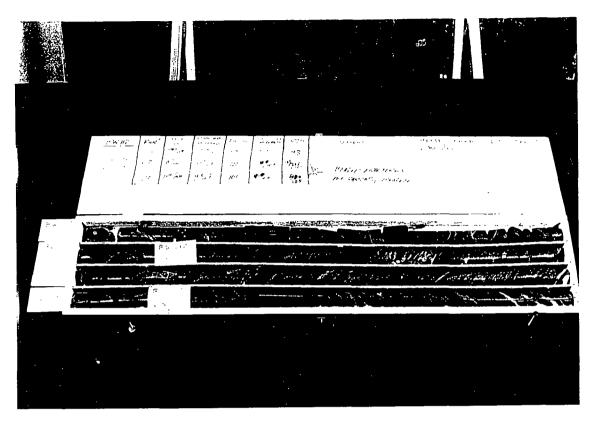
JOB NO.: <u>G-8026</u>

DATE CORED: ___10/9/90

PHOTOGRAPHED BY: E. Olson

OONE DANNEL					DIAMETEN.		
		DEPTH OF RUN (FT.)		RECOVERY		RQD	
BORING NO.	RUN NO.	FROM:	TO:	INCHES	%	INCHES	%
BW 111	C6	238.4	248.4	120	100	120	100
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					į		
						'	





Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI

LOCATION: Gaffney, South Carolina

CLIENT: Medley Farm Steering Committee

CONTRACTOR: Environmental Drilling and Services for Phase I

Atlanta Testing and Engineering for Phase II

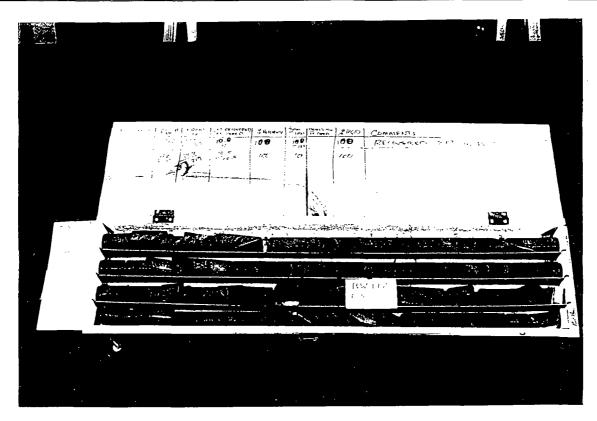
JOB NO.: ______G-8026

PHOTOGRAPHED BY: E. Olson

DATE CORED: ___10/9/90

			DEPTH OF RUN (FT.)		RECOVERY		RQD	
BORING NO.	RUN NO.	FROM:	TO:	INCHES	%	INCHES	%	
BW 112	C1 C2 C3	179 185 195	185 195 199	69.6 120 48	97 100 100	64.7 88.8 41.28	93 74 86	





Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI

LOCATION: Gaffney, South Carolina

CLIENT: Medley Farm Steering Committee

CONTRACTOR: Environmental Drilling and Services for Phase I

Atlanta Testing and Engineering for Phase II

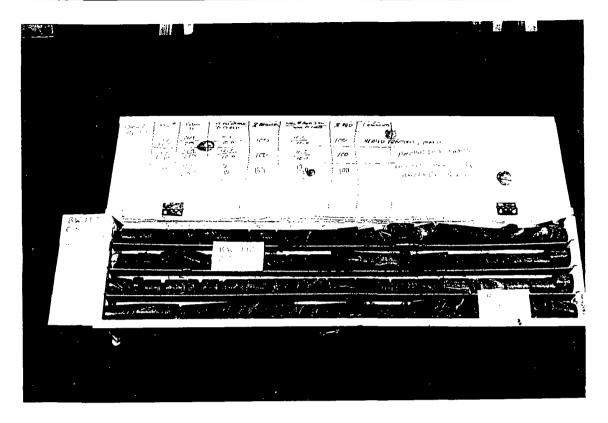
JOB NO.: <u>G-8026</u>

DATE CORED: __10/11-25/90

PHOTOGRAPHED BY: E. Olson

		DEPTH O	F RUN (FT.)	RECO	VERY	RC	QD
BORING NO.	RUN NO.	FROM:	TO:	INCHES	%	INCHES	%
BW 112	C4 C5	199 209	209 219	117.6 120	98 100	117.6 120	98 100





Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI

LOCATION: Gaffney, South Carolina

OLITAIT Mediau Form Cheering Committee

CLIENT: Medley Farm Steering Committee

CONTRACTOR: _Environmental Drilling and Services for Phase I

Atlanta Testing and Engineering for Phase II

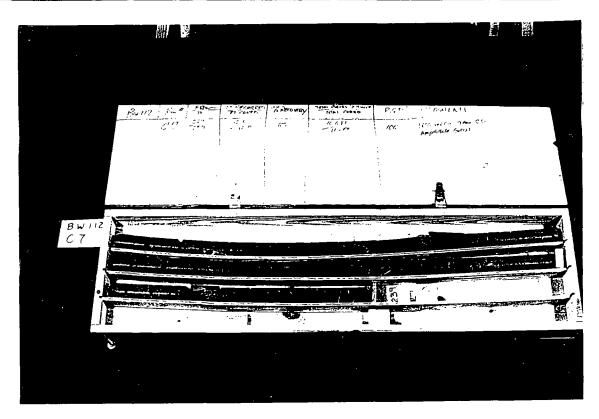
JOB NO.: G-8026

DATE CORED: __10/11-25/90

PHOTOGRAPHED BY: E. Olson

		DEPTH O	F RUN (FT.)	RECOVERY		RQD	
BORING NO.	RUN NO.	FROM:	TO:	INCHES	%	INCHES	%
BW 112	C5 (cont.) C6 C7	209 219 229	219 229 239	120 120 120	100 100 100	120 120 120	100 100 100





Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI

LOCATION: Gaffney, South Carolina

CLIENT: Medley Farm Steering Committee

CONTRACTOR: Environmental Drilling and Services for Phase I

Atlanta Testing and Engineering for Phase II

JOB NO.: G-8026

DATE CORED: __10/25/90

PHOTOGRAPHED BY: E. Olson

BORING NO.		DEPTH OF RUN (FT.)		RECOVERY		RQD	
	RUN NO.	FROM:	TO:	INCHES	%	INCHES	%
BW 112	C7	229	239	120	100	120	100
				:]
	ĺ	1					
	1						